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TITLE: EFFECT OF FOOD, DIET AND NUTRITION ON MILITARY READINESS AND PREPAREDNESS OF ARMY PERSONNEL AND DEPENDENTS IN A PEACETIME ENVIRONMENT

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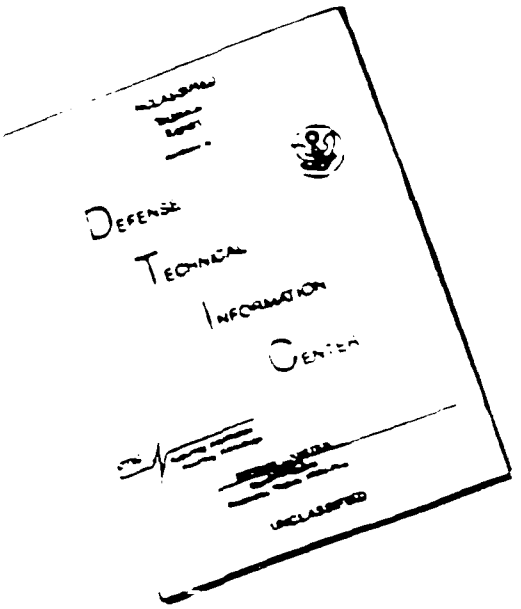

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Four projects conducted at the Pennington Biomedical Research Center (PBRC) are reported herein. A clinical research laboratory is operational and supports U.S. Army Research Institute of Environmental Medicine (USARIEM) field research in sites ranging from Alaska to Bolivia. A stable isotope laboratory supports USARIEM research by determining energy expenditure in the field. The Diet, Neurotransmitters and Behavior research team conducts basic research in the effect of diet on behavior through biochemical, physiologic, and behavioral assessment studies. New studies assessing sleep deprivation and approaches to modifying this stress through dietary manipulation are being initiated. The Menu Modification Project has analyzed and latered two sets of Army menus. The Fort Polk Heart Smart Project, completed in 1991, is described elsewhere.

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FOREWORD

Opinions, interpretations, conclusions and recommendations are those of the author and are not necessarily endorsed by the U.S. Army.

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For the protection of human subjects, the investigator(s) have adhered to policies of applicable Federal Law 45CFR46.

In conducting research utilizing recombinant DNA technology, the investigator(s) adhered to current guidelines promulgated by the National Institutes of Health.

PI Signature: Donna Egan MD Date: 8/15/92

ANNUAL REPORT
US ARMY GRANT
July 27, 1991 - July 26, 1992

Introduction

In July, 1988, Grant #DAMD17-88-G-8023 was awarded to Pennington Biomedical Research Center (PBRC) for $3,500,000 for a three-year period to fulfill the following research objectives:

1) "Establish a Nutritional Health Promotion Research Development Test and Evaluation (RDTE) Center for military personnel and dependents in a peacetime environment to accomplish the following:

   a. Assess the nutritional adequacy of the diet of military personnel to promote health and military readiness;

   b. evaluate and develop military dietary programs for dining facilities, commissaries and other food service facilities operated by the military;

   c. monitor the nutritional status of military personnel and their family members; and

   d. develop and evaluate military nutrition, education, and health promotion programs.

2) Provide nutrition laboratory research support to the army's military nutrition research program at USARIEM to accomplish the following:

   a. provide biochemical assessment of nutrition status;

   b. perform food biochemistry analysis; and

   c. establish and perform stable isotope methodologies for nutritional assesssment."

Five projects whose scientific design has been approved by the United States Army are listed below.

   1) Clinical Research Laboratory, Richard Tulley, Ph.D., Laboratory Manager,

   2) Stable Isotope Laboratory, James DeLany, Ph.D., Laboratory Manager,

   3) Diet, Neurotransmitters and Behavior, Chandan Prasad, Ph.D., Principal Investigator,

4) Cardiovascular Health Promotion for Military Personnel and their Dependents-the Fort Polk Heart Smart Project-Principal Investigators, Gerald S. Berenson, M.D., and David Harsha, Ph.D.,

5) US Army Menu Modification Project, Nena Cross, Ph.D., Principal Investigator.

This annual report describes progress during the fourth and final year of the grant. Discussions of individual projects funded under this grant follow. The project described in (4) above, the Fort Polk Heart Smart Project received no funds during teh year of this annual report.

I. Clinical Research Laboratory

A. Progress on Equipment Acquisition

A second HPLC system with autosampler and diode array and fluorescent detectors (Hewlett Packard 1090M) was received and installed in this past year. This instrument has been in use for retinol analyses and amino acid method development.

In addition, a microwave digestion unit was obtained. A graduate student, Lynelle Hansen, worked on methods of digestion for atomic absorption analyses on this unit.

A computer controlled integration system was acquired late this year. It will be used to control and analyze peaks from the catecholamine HPLC system and the Antek nitrogen analyzer. This system is still in the process of being installed. Successful installation should make it easier to run these instruments and analyze the data from them.

B. Progress on Method Development

1. Vitamin C

A new method for vitamin C was developed and automated on the Beckman Synchron CX5. It is a rate method in which ascorbic acid (AA) is oxidized to dehydroascorbic acid (DHAA) by ascorbate oxidase (AO) at pH 6.5. The rate of reaction is monitored by following the change in absorbance of the product of the reaction of DHAA with o-phenylenediamine (OPDA) at 340 nm. Interferences caused by nonspecific reactions with OPDA are eliminated by performing a blank with the reagent for five minutes prior to the addition of the ascorbate oxidase. Linearity is 0-200 mg/L, recoveries are 94% for spiked samples and the coefficient of variation is 6% at a level of 13 mg/L. Studies were carried out to determine the optimized conditions for the assay (see appendix). Optimal conditions include final concentrations of 1.7 mg/L AO, 0.4 g/L OPDA, and a pH of 6.5 in phosphate buffer. This method has

been published as an abstract in Clinical Chemistry (see appendix). Correlation studies were performed comparing this method to the dinitrophenylhydrazine method. These results are also shown in the appendix. Differences in the correlation may be related to the nonspecific nature of DPNH method. The lab procedure for vitamin C is shown in the appendix.

2. Vitamin A

A method for the HPLC analysis of vitamin A (retinol) and retinol palmitate was developed (see 13th Quarterly Report). This method has good precision and recovery. The method can also measure vitamin E. However, this has not been validated for precision and recovery. This will be done when the need arises for this analysis. A sample chromatogram is included in the appendix.

3. 25-Hydroxy Vitamin D

A method for 25-hydroxy vitamin D was set-up using an INCstar kit which uses a tritium labeled 25-hydroxy vitamin D tracer. The method shows good reliability and has been used in two studies to date.

4. Erythrocyte Enzymes with in vitro Activation as Markers of Vitamin Status (Erythrocyte Transketolase with Activation by Thiamine Pyrophosphate/ Erythrocyte Glutathione Reductase with Activation by FAD/Erythrocyte AST with Activation by Pyridoxal Phosphate)

These enzymes were successfully automated on the Beckman CX5 using conditions as determined by Bayoumi for manual analyses (Clin Chem 1976; 22: 327-337). Conditions are given in the appendix.

5. Catecholamines

Plasma and urine catecholamine assays are now being performed by the Clinical Research Laboratory. These methods are in routine use for clinical studies being performed at PBRC. The catecholamines are analyzed using a Bio Rad HPLC system for catecholamines (anion exchange column with electrochemical detection). The sample processing and conditions are those as prescribed by Bio Rad for its system. A sample chromatogram is included in the appendix.

C. Progress on Quality Control

Quality Control was performed routinely for all tests being performed by our laboratory. These are tracked using Bio Rad Lyphline quality control software and results are compared to other users across the country monthly. We have done very well on these comparisons.

Interlaboratory surveys (CAP) are routinely performed for general chemistry, hematology, and urinalysis. Results have been very good this past year (see appendix).

D. Progress on Army Research Projects

Studies completed this past year include the following:

Sodium Depletion Study: Na, K, Ca, Mg, P, N in sweat, food, feces, urine, and water - 3900 tests (results shown in Quarterly Report 8/14/91).

Survival Study: Chem Panel, Iron, HDL, TIBC, ferritin - 1500 tests.

Ranger 1: chem panel, glycerol, free fatty acids, lactate, HDL, beta hydroxybutyrate, serum vitamin B12, folate, 25 hydroxy vitamin D, RBC folate, RBC transketolase with in vitro stimulation by thiamine pyrophosphate, RBC glutathione reductase with in vitro stimulation by FAD, and RBC AST with in vitro stimulation by pyridoxal phosphate - 10,642 tests (results shown in Quarterly Report 1/31/92).

MRE Study: chem panel, glycerol, free fatty acids, lactate, HDL, beta hydroxybutyrate, serum vitamin B12, folate, 25 hydroxy vitamin D, RBC folate, RBC transketolase with in vitro stimulation by thiamine pyrophosphate, RBC glutathione reductase with in vitro stimulation by FAD, and RBC AST with in vitro stimulation by pyridoxal phosphate - 7479 tests.

Ranger 1.5: chem panel, glycerol, free fatty acids, lactate, HDL, beta hydroxybutyrate, serum vitamin B12, folate, 25 hydroxy vitamin D, RBC folate, RBC transketolase with in vitro stimulation by thiamine pyrophosphate, RBC glutathione reductase with in vitro stimulation by FAD, and RBC AST with in vitro stimulation by pyridoxal phosphate - 312 tests (results in Quarterly Report 8/92).

Total Tests run in 1992: 23,833

II. Stable Isotope Laboratory

A. Overview

The research conducted by the Stable Isotope Laboratory has been in the area of energy and water requirements of soldiers under harsh environmental conditions. The method used to determine energy requirements is the doubly labeled water technique, which involves oral administration of water labeled with ^{2}H and ^{18}O. Saliva and urine samples are then obtained for periods of 4-14 days, longer with redosing. Water intake can be determined using only the ^{2}H labeled water.

The Stable Isotope Lab was involved in several Army research

projects during the current year. One was a water turnover study, part of the Fairchild Air Force Base Survival Study. For this study, urine and saliva samples were analyzed for deuterium to determine total body water at the beginning and end of the study, and for water turnover throughout the study. The analyses for the Fairchild Air Force Base Survival Study have been completed.

Another project completed is the Rangers Training Study, in which energy expenditure and water turnover were measured using doubly labeled water. There were four phases of this study, the Fort Benning phase (7/26/91 - 8/10/91), the Mountain phase (8/11/91 - 8/28/91), the Swamp phase in Florida (8/29/91 - 9/13/91), and a final Desert phase (9/14/91 - 9/26/91). The analyses for this Ranger Training Study were completed.

A third study completed this year was the Wolf Creek Study, done at the Marine Mountain Warfare Training Center, Bridgeport, California, in which water turnover was studied using ^{2}H labeled water.

Several new studies are in the planning stages or underway. New Pikes Peak and Ranger Studies and a collaborative study with the Israel Military Services will be carried out in the next year.

B. Program on Army Research Projects

1. Fairchild Air Force Base Survival Study

There were 10 soldiers participating in the first iteration and 16 soldiers participating in the second iteration of the Survival Study. The initial and final deuterium enrichments for calculation of isotope dilution space (and total body water), and the deuterium elimination rate for calculation of water turnover were calculated. The results were reported in the 13th Quarterly report, and sent to Tanya Jones for final calculations.

2. Rangers Training Study

There were logistical problems with the Ranger Study due to the high dropout rate. The original (optimistic) plan was to follow 6 soldiers through the entire training program, but only one of the soldiers chosen to receive label completed the program, and 3 soldiers completed three of the four phases. Data were obtained from 6 soldiers during Phases 1 and 3, and from 5 soldiers during Phases 2 and 4. Urine samples from a placebo group were analyzed for deuterium and ^{18}O, to correct for any changes in isotope abundance of the drinking water of the soldiers due to the changes in location. The detailed data was given in Figures and in the Appendix of the 14th Quarterly Report. The mean change in isotope abundance for Phase 4 (the only phase in which significant changes were observed) were used to correct isotope enrichments for the labeled subjects.

3. Wolf Creek Study

The Wolf Creek Study was carried out at the Marine Mountain Warfare Training Center, Bridgeport, California. Water turnover was studied using ^{2}H labeled water. Urine and saliva samples from 1/24/92, and 1/31/92, and urine samples from 1/28/92, of 26 soldiers with complete samples were analyzed.

4. Ongoing Projects

Discussions have been carried out with Col. Askew regarding planning for total body water and water turnover measurements for the upcoming Pikes Peak Study.

Discussions have been carried out regarding the collaborative study with the Israel Military Services. A letter has been received from Major Burstein of the IDF Medical Corps, Institute of Military Physiology. Samples from the "Mountain Phase" were collected in February 1992 and have been analyzed by Dr. Andy Coward at the Dunn Nutrition Laboratories, in Cambridge, U.K. The summer study will begin in August, and samples will be shipped to the Pennington Center for analyses of ^{18}O and ^{2}H.

Planning for the Ranger 2 Study has been carried out with Dr. Reed Hoyt. The dosing schedule for ^{18}O and ^{2}H, and the sampling time points were listed in tables in the 16th Quarterly Report. To obtain estimates of isotope elimination, water turnovers used were similar to those observed during the last Ranger study. The estimated energy expenditures were slightly higher than last years study, since in the present Ranger study, the soldiers will be given more calories and worked even harder than last year.

Energy expenditure during the Ranger Training Study was very high, with an mean of 4350 kcal/d for the days covered by the doubly labeled water periods. Mean energy expenditure was as high as 6045±1537 kcal/d during the "Classes" portion of the Mountain Phase. The isotope enrichments were too low to obtain reliable data for the end of the Fort Benning Phase, particularly the 8/6 to 8/10 portion. Even some of the 8/6 time points were very low, leading to less reliable measures of energy expenditure. It was interesting to note that one soldier who dropped from the study and had barracks/grounds duty had an energy expenditure considerably lower than the mean energy expenditure for the periods. The isotope enrichments for the other Phases was high enough to obtain reliable data. The mean energy expenditures were 4197±1052, 4978±775, 3769±998, and 4328±555 for Phases 1 to 4.

The preliminary water turnover results indicate very high water intakes, particularly during the Fort Benning Phase. This high water turnover led to the low isotope enrichments which caused problems in energy expenditure measurements late in the period. The mean water turnover was 8.5±1.3, 5.9±0.6, 6.6±1.3 and 5.1±1.7

liters per day for Phases 1 to 4. Surprisingly, the water turnover was lowest during Phase 4, the desert phase.

No conclusions can be drawn for the Survival Study or the Wolf Creek Study, since the final calculations were never sent to PBRC.

III. Diet, Neurotransmitters and Behavior

A. Introduction

The staff of the Neuroscience Laboratory includes Chandan Prasad, Ph.D., Jeffery W. Brock, Ph.D., Shakeel Farooqui, Ph.D., Anwar Hamdi, M.D.,Ph.D., and Masahiro Sakata, M.D. The scientific staff are funded by the Department of the Army Grant DAMD 17-88-Z-8023.

The focus of the neuroscience program is to apply the expertise of the current researh staff to investigate the role of nutrition in behavior. Projects were undertaken which included behavioral, neurophysiological, and molecular neurobiological measurements to study the effects of macronutrient manipulations on higher brain function. Overall, the research has broad application to problems related to aging and development, mental function and dysfunction, as well as to the questions of nutrition science.

B. Administrative Items.

1. Dr. Hans Rudolph Berthoud is now present at the Pennington Biomedical Research Center as Chief of the Neuroscience Division, which includes Dr. Prasad's team of investigators in the Neuroscience Laboratory.

2. The Neuroscience Lab has hired a full-time technician (Research Associate) whose work effort is focused on the collection and analysis of behavioral data in rats.

C. Scientific Progress.

1. Project: Duration of auditory memory traces in the rat brain.

An event-related potential called "stimulus mismatch negativity" is generated by the brain's automatic response to changes in repetitive auditory input. This response has been previously recorded only in awake humans and in sleeping cats. Investigators have postulated that varying the interstimulus interval during the stimulus mismatch negativity paradigm provides a valid measurement of the duration of auditory, short-term memory traces. Our laboratory has successfully completed the first recording of stimulus mismatch responses (MMRs) from urethane/alpha-chloralose anesthetized rats. Data analyses of MMRs in normal adult and aged rats have been completed.

Two groups of male, Sprague-Dawley rats were used in these studies. Groups 1 consisted of rats that were 7 - 11 months old (N = 20) and group 2 consisted of rats that were 18 months old (N = 8). Each animal was anesthetized using alpha-chloralose and urethane (50 mg/kg and 1.5 gm/kg i.p., respectively). The body temperature was maintained at 37±.5 °C by a heating pad placed under the animal and monitored by rectal probe. A tracheostomy was performed and the animal was permitted to breathe spontaneously. The animal's head was fixed in a stereotaxic frame. Ear bar adaptors were positioned in the indention of the animal's squamosal bones. Earplug speakers were inserted into the left and right auditory meatus and secured in place with surgical tape.

Prior to the recording of MMRs, the functional integrity of the animal's auditory circuit was analyzed by recording brainstem auditory evoked potentials. Platinum wire electrodes were inserted subcutaneously over the skull. A reference electrode was postioned over the top of the skull at the midline. Active electrodes were positioned just behind each ear and lateral to the temporalis muscles. A ground electrode was positioned over the frontal bone. The auditory stimulus consisted of rarifaction clicks, 100 usec in duration, and at a rate of 11.4/sec. The stimulus was delivered binaurally at different intensity levels (35 and 75 dB nHL). Wave IV latencies were recorded and graphed to verify the integrity of the animal's auditory information processing.

For the recording of MMRs, platinum needle electrodes were placed in contact with the dura mater through small holes made in the skull. A reference electrode was located at Lambda. An active electrode was located 4 mm lateral over the right parietal cortex. A ground electrode was placed over the frontal cortex. A standard tone was delivered binaurally to the animal with a frequency of 4 kHz, an intensity of 90 dB nHL, a 1 msec ramp, and a 10 msec plateau. The standard tone was delivered with a 95% probability. The deviant tone was a 6 kHz frequency that was delivered with a 5% probability, but was otherwise identical to the standard tone. Electroencephalographic activity in response to the standard tones (950 sweeps) and deviant tones (50 sweeps) were averaged independently. Recordings were made with a bandpass of 0.01 - 30 Hz, and with a 500 msec sweeptime. Separate recordings were made using different interstimulus intervals (ISI): 1, 2, 3, 5, 7, and 10 seconds.

The data were analyzed by integrating the areas under each waveform generated by the standard and deviant tones. Responses to deviant tones were corrected for the mismatch attributable to a difference in sweep-number alone. The magnitude of the remaining Waveform Integral represented the animals' abilities to distinguish the deviant tones from the standard tones. The average Waveform Integrals at each ISI were statistically analyzed by Kruskal-Wallis nonparametric analysis of variance and Mann-Whitney U tests. Statistical significance was accepted at the 90% confidence level.

The normal, adult rats were 7 - 11 months old and weighed 487 ± 10 grams at the time of recording. A plot of Wave IV latencies from the auditory evoked potentials demonstrated a normal audiometric profile in this group of animals, with normal thresholds and recruitment. At each ISI, the distributions of normal, young, adult rats MMRs were skewed and sometimes with bimodal distributions. However, a comparison of mean MMRs with different ISIs (MMR-ISI profile) resembled a bell-shaped curve in which the inclination and declination represent the timecourse for the formation and degradation, respectively, of short-term, auditory memory traces. The magnitude of MMRs were smallest at 1-sec ISI, but gradually increased to a maximum mismatch at 3-sec ISI ($p < 0.05$, Mann-Whitney test, 3-sec ISI compared to both 1- and 2-sec ISI). At 5-sec ISI, the response magnitude was still robust, but declined to a minimum by 10-sec ISI.

Since MMRs are generated by the auditory association cortex, decreases in MMR magnitude are believed to be due to inaccurate or incomplete feature analysis of the auditory stimuli. Therefore, it has been argued that the declination of the MMR profile curve reflects degradation of auditory memory traces in the brain. In the present study, the animals demonstrated maximum recognition of deviant frequencies when the auditory stimuli were delivered within 3 - 5 seconds of each other. With longer ISI, auditory feature analysis became innaccurate or incomplete. These data suggest that auditory memory traces in the normal anesthetized rat were sustained for as much as 5 seconds before degradation ensued.

The aged rats were 18 months old and weighed 611 ± 7 grams at the time of recording. Audiometric analysis of the aged animals demonstrated profiles of threshold and recruitment that were not different from the young animals. However, the MMR profile of the aged animals was very different from that of their younger cohorts. Although the responses at 1-sec ISI were not different between the two groups, the aged animals showed a dramatic decrease in MMR magnitude at 2-sec ISI ($p < 0.05$).

The aged animals were obviously less efficient in performing higher order processing of auditory information than the younger animals, perhaps due to more rapid degradation of auditory memory traces. Alternatively, aging may be associated with loss of some early components of frequency analysis that result in incomplete or delayed recognition of differing tones. The observation that MMRs were decreased in the aged animals is consistent with the observations of others that working memory in rats is impaired with age.

These data represent not only the first recording of MMRs from the rat, but the first such recording in any anesthetized animal. Results from the aged animals strengthen the interpretation that MMRs recorded with a variable-ISI paradigm provide a measurement of the duration of short-term memory traces. The recording of MMRs in

anesthetized rats presents an economical model for studying the mechanisms of memory performance. This method may be of interest to a broad spectrum of Neuroscientists who are generally interested in the study of higher brain functions.

2. Project: Dietary protein and higher brain function in the rat.

The major objective of this study was to explore possible correlations between cortical cell morphology, cortical electrical activity, and animal behavior, using varying levels of protein in the diet as the primary manipulation. In the first part of this study, we hypothesized that rats consuming a long-term, high-protein diet present with a generalized inability to cope with stress. Male, Sprague-Dawley rats were divided into two groups (N = 7 each), which were fed diets of 50% casein (high-protein or HP group) and 20% casein (normal-protein or NP group). After consuming their respective diets ad libitum for 32 weeks, each animal was tested for 5 days (1 trial/day) using the rat swimming test of Porsolt, which measures the animal's emotional adaptation to stress. It was observed that by Day 5, the NP group demonstrated a significantly higher ($P<0.05$) immobility time than the HP group. These data suggest that the animals on the high-protein diet were less able to develop an effective strategy for coping with repeated stress.

Based upon the results of Part 1 of this study, a second experiment was performed which analyzed the short-term memory formation in the rats maintained on normal- and high-protein diets. This study tested the hypothesis that abnormal behavior in rats that consume a high-protein diet is associated with decrements in higher-order sensory information processing in the brain. In this procedure, each animal was anesthetized using alpha-chloralose and urethane (50 mg/kg and 1.5 gm/kg i.p., respectively). The body temperature was maintained at 37 $\pm$ .5 °C by a heating pad placed under the animal and monitored by rectal probe. A tracheostomy was performed and the animal was permitted to breath spontaneously. The animal's head was fixed in a stereotaxic frame. Ear bar adaptors were positioned in the indention of the animal's squamosal bones. Earplug speakers were inserted into the left and right auditory meatus and secured in place with surgical tape.

Platinum needle electrodes were placed in contact with the dura mater through small holes made in the skull. A reference electrode was located at Lambda. An active electrode was located 4 mm lateral over the right parietal cortex. A ground electrode was placed over the frontal cortex. A standard tone was delivered binaurally to the animal with a frequency of 4 kHz, an intensity of 90 dB nHL, a 1 msec ramp, and a 10 msec plateau. The standard tone was delivered with a 95% probability. The deviant tone was a 6kHz frequency that was delivered with a 5% probability, but was otherwise identical to the standard tone. Recordings were made

with a bandpass of 0.01 - 30 Hz, and with a 500 msec sweeptime. Electroencephalographic activity in response to the standard tones (1000 sweeps) and deviant tones (50 sweeps) were averaged independently. Separate recordings were made using different interstimulus intervals (ISI): 1, 3, and 7 seconds. The data were analyzed by integrating the areas under each waveform generated by the standard and deviant tones. Responses to deviant tones were corrected for the mismatch attributable to a difference in sweep-number alone. The magnitude of the remaining waveform integral represents the animal's ability to distinguish the deviant tones from the standard tones at the level of the auditory association cortex, and this is called the mismatch response (MMR).

In the normal-protein diet group, the MMRs were largest at 1-sec ISI. The magnitude of MMRs declined at 3- and 7-second ISI, suggesting a degradation of short-term memory traces in a way that resulted in either incomplete or inaccurate feature analysis of the auditory stimuli within that timeframe. In the high-protein diet group, there was a high variability that prevented statistical significance compared to the NP group. However, there was a trend in the data from the HP diet animals that suggested a decrease in the magnitude of their MMRs compared to the control animals. A scatter-plot of the data comparing each animal's immobility time in the Porsolt test on Day 5, plotted against the animal's MMR recorded at 1-sec ISI suggests that there may be a correlation between an animal's response to repeated stress and its accuracy in performing analysis of auditory stimuli. Thus, animals maintained on a high-protein diet appear to be different from control animals in their ability to perform higher-order sensory information processing. Impaired development, or increased degradation, of short-term memory traces in the brain may be an important factor relating to the abnormal behavior of animals maintained on a long-term, high-protein diet.

3. Project: Dietary protein and changes in monoamine neurotransmitter levels in the rat brain.

This was the final data collection procedure related to the mission of the Neuroscience Lab sponsored by Dept. of the Army Grant DAMD 17-88-Z-8023. Final analyses of the data on the effects of dietary protein on brain levels of dopamine, DOPAC, and HVA have been completed. The analyses of serotonin, 5-HIAA, norepinephrine, and epinephrine are not yet completed. The following study presents evidence that dopamine levels in the rat brain covaried with the level of protein in the diet.

Proteins and their breakdown products, the amino acids, serve as precursors for amine neurotransmitters in the brain. Studies have shown that both increasing and decreasing dietary protein levels have an effect on higher brain function in animals, although the mechanisms responsible for dietary protein-induced behavior remain unclear. Recent studies have shown that rats maintained on

a chronic, high-protein diet (50% casein) demonstrated increased spontaneous locomotor activity, were more reactive to nociceptive stimuli than rats fed either normal-protein (20% casein) or low-protein (8% casein) diets. Changes in the cerebral cortical activity of rats maintained on 50% casein were indicative of increased central catecholaminergic activity and preparatory arousal levels. Other studies have shown that the 8% casein diet resulted in a decrease in the number of dopamine D2 receptors in the rat striatum. The implication is that central dopaminergic activity may be facilitated or inhibited, respectively, by an increase or decrease in dietary-protein levels. The forebrain dopaminergic systems of the brain have been investigated extensively by neuroanatomists and behavioral pharmacologists, and continue to be of primary interest to clinicians. In the present study, the levels of dopamine and its metabolites were analyzed in the brains of the same animals for which behavioral abnormalities were reported earlier. The brain regions selected for analysis were known postsynaptic tissues for dopaminergic afferent neurons, and they represented neuroanatomically and functionally distinct dopaminergic systems in the brain: the nigrostriatal, mesolimbic, mesocortical, mesohippocampal, periventricular, incerto-hypothalamic, and descending dopaminergic systems.

Eighteen male, Sprague-Dawley rats were obtained as weanlings from Harlan Sprague-Dawley (Indianapolis, IN). The animals were divided into 3 groups (N = 6 each) and placed on one of three diets: low-protein (LP, 8% casein) ad libitum, normal-protein (NP, 20% casein) pair-fed with the LP group, and high-protein (HP, 50% casein) pair-fed with the LP group. After the animals had been on their respective diets for 8 months, all were sacrificed by decapitation and their brains were stored at -80°C.

The brains were sliced on a freezing microtome and 27 areas of the brain were collected using the punch-dissection method of Palkovits: amygdala, caudate/putamen, cerebral cortex (frontal, parietal, entrohinal), globus pallidus, hippocampal areas (dentate gyrus, subiculum), hypothalamic nuclei (anterior, lateral, medial pre-optic, posterior, suprachiasmatic nuclei), interpeduncular nucei, medial forebrain bundle, periaqueductal (central) gray area raphe nuclei (doral and medial), substantia nigra, thalamic nuclei (centromedial, inferior colliculi, medial geniculate, posterior, ventrolateral), tuberculum olfactorium, and the ventral tegmental area. The accuracy of punch location was verified by fixing the tissue sections afterward in 10% formalin, treating them with a Nissl body stain, and comparing the stained sections to Paxinos and Watson's Stereotaxic Atlas of the Rat Brain. The tissue samples were homogenized individually by sonication for 15 seconds in 0.1 M perchloric acid. The homogenates were centrifuged at 15,000 rpm for 15 minutes, then filtered through 0.45 um membranes. The pellets were reconstituted in 0.1 N NaOH for the spectrophotometric determination of protein content. Aliquots from the filtered supernatant were analyzed by reverse-phase high-performance liquid

chromatography and quantitated by electrochemical detection. The average amine contents for each brain area were statistically analyzed by single-factor analysis of variance, followed by unpaired Student's t-tests. Statistical significance was accepted at the 95% confidence level (alpha = 0.05, two-tailed test).

At the time of sacrifice, the body weights of the animals were not significantly different between the 3 diet groups (Mean $\pm$ S.E.M.): LP group, 507 $\pm$ 14; NP group, 472 $\pm$ 11; HP group, 475 $\pm$ 16 grams. The effects of the dietary protein manipulations on the contents of DA, DOPAC, and HVA in the 27 different nuclei were catagorized in terms of the dopaminergic system in the brain which they represent. Dopamine levels in the substantia nigra and caudate/putamen (which constitute most of the mesolimbic system) were significantly decreased by feeding the LP diet. Increasing dietary protein also increased dopamine content of the caudate/putamen. Dopamine levels in the ventral tegmental area and frontal cortex (which constitute the mesocortical system) were not affected by protein levels in the diet. Diminished dopamine levels observed in the medial forebrain bundle with the LP diet probably reflect the changes seen in the mesolimbic system. Monoamine oxidase activity (metabolism of DA to DOPAC) was sensitive to changes in dietary protein only in the caudate/putamen and the medial forebrain bundle, where DOPAC content was diminished by the LP diet. The activity of catechol-O-methyltransferase (metabolism of DA to HVA) was sensitive to changes in dietary protein only in the substantia nigra and frontal cortex, where HVA content diminished with the LP diet. HP diet also resulted in a decrease in HVA levels in the frontal cortex.

The values obtained from neurochemical analysis of the NP control group were similar to those published by other investigators who have examined the levels of DA, DOPAC, and HVA in the rat brain. One important aspect of this comprehensive mapping of the distribution of changes in DA levels in the brain is that the data may be interpreted from a behavioral science perspective. Heterogeneity in the distribution of DA in the brain allows for the differences in DA levels in response to manipulation to be related to the functional specialization of those brain areas. Viewing the data in this way makes it is possible to gain further insight into the physiological mechanisms that link dietary macronutrients and behavior. The distribution of changes in DA metabolism induced by the different diets suggests that specific dopaminergic systems are activated by the manipulation of dietary protein. These data demonstrate that the level of DA and its metabolites changed following dietary protein manipulation in a region-specific manner. The nigrostriatal and mesohippocampal systems were the most sensitive to changes in dietary protein, compared to the mesocortical, mesolimbic, periventricular, and descending DA systems of the brain. The incerto-hypothalamic system was remarkably insensitive to dietary protein. When changes in DA levels were apparent, DA content generally covaried with the level

of protein in the diet. In conclusion, differential modulation of dopaminergic activity in discrete regions of the brain may be a mechanism by which dietary protein influences the expression of locomotor behavior in rats.

D. Manuscripts published/in press, Neuroscience Lab, 1991-92

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2. Emmanual S. Onaivi, Stephanie Talton, and Chandan Prasad. The level of protein in diet modulates the behavioral effects of amphetamine. In: Endocrine and Nutritional Control of Basic Biological Functions. H. Lehnert, R. Murison, H. Weiner, D. Hellhammer, and J. Boyer (Eds), 1991.

3. Shakeel M. Farooqui, Jeffery W. Brock, Anwar Hamdi, and Chandan Prasad. Antibodies against synthetic peptides predicted from the nucleotide sequence of D_2 receptor recognize native dopamine receptor protein in rat striatum. Journal of Neurochemistry 57:1363-1369, 1991.

4. Jeffery W. Brock and Chandan Prasad. Motor, but not sensory, cortical potentials are amplified by high-protein diet. Physiology and Behavior 50:887-893, 1991.

5. Anwar Hamdi and Chandan Prasad. Attenuation of pulsatile changes in the density of striatal [^{3}H]GBR-12935 binding sites during chronic ethanol consumption. Brain Research 567:71-75, 1991.

6. Chandan Prasad, Anwar Hamdi, Jeffery W. Brock, and Charles W. Hilton. Cyclo(His-Pro) and food intake. In: The Science of Food Regulation. George Bray, Ed., Louisiana State University Press, Baton Rouge, Lousiana, 1992.

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13. Emmanuel S. Onaivi, Jeffery W. Brock, and Chandan Prasad. Dietary protein levels alter rat behavior. in press, Nutrition Research, 1992.

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15. Shakeel M. Farooqui and Chandan Prasad. An antibody to dopamine D2 receptor inhibits dopamine antagonist and agonist binding to dopamine D2 receptor cDNA transfected mouse fibroblast cells. in press, Life Sciences, 1992.

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E. Manuscripts in preparation

1. Jeffery W. Brock, Keith Ross, Ashley Cowart, and Chandan Prasad. Stimulus mismatch negativity in the anesthetized rat: normative data and the effects of aging. (in preparation for Electroencephalography and Clinical Neurophysiology).

2. Jeffery W. Brock, Keith Ross, and Chandan Prasad. REM sleep deprivation and caloric intake in the rat. (in preparation for Physiology and Behavior).

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4. Shakeel Farooqui, Joseph LaFleur, and Chandan Prasad. Coupling of GTP-binding protein to dopamine D_2 receptor: presence of an epitope on the 110 kDa D_2 receptor complex recognized by antibody to amino terminal peptide of the Gi-beta. (in preparation for Journal of Neurochemistry).

5. Jeffery W. Brock, Shakeel Farooqui, Emmanuel Onaivi, and Chandan Prasad. Modulation of serotonin levels in discrete areas of the rat brain by altering dietary protein:carbohydrate ratio.

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independent of G-protein uncoupling. American Federation of Clinical Research, Southern Meeting, Metabolism Section, 1991.

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6. Emmanuel S. Onaivi, Shorye Payne, Jeffery W. Brock, Anwar Hamdi, Shakeel Farooqui, and Chandan Prasad. The performance of Sprague-Dawley and Hooded rats in the shuttle-box avoidance paradigm is dependent on the level of protein in diet. Third IBRO World Congress of Neuroscience, 1991.

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10. Massarat Ali, Jeffery W. Brock, C. Douglas Gulley, and Wayne V. Vedeckis. Age-related changes in regional distribution of retinoic acid receptor (RAR-beta) in rat brain. American Society for Cell Biology, 1991.

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12. Jeffery W. Brock, Keith Ross, and Chandan Prasad. Maladaptive coping patterns in the rat induced by high dietary protein:carbohydrate ratio. Journal of Cellular Biochemistry suppl. 16B:261, 1992.

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17. Shakeel Farooqui and Chandan Prasad. Retinoic acid mediated induction of dopamine D2 receptor in human SHSY-5Y neuroblastoma cells. submitted to Society for Neuroscience, 1992 meeting.

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IV. Fort Polk Study

Introduction

The past decade has seen increased interest in nutritional and overall health status issues in Americans. As more data become available for the nation as a whole, it is natural to explore various sub-populations with an eye for contrasts relative to the whole. To this end both sexes and many ethnic and racial groups have received considerable attention.

Another sub-population approach is to investigate health issues among different occupational groups. One of the largest is, of course, the U.S. military. During the late 1980's the U.S. Congress mandated the Army to conduct research into a variety of nutritional, health, and wellness behavior topics in both soldiers and their families. In 1988 the Fort Polk Heart Smart Project was instituted specifically to gather data on military families. Three sub-studies with interlocking goals were developed. These were:

Project 1. Nutritional and Physical Activity Assessment of Military Wives;

Project 2. Cardiovascular Disease Risk Factor Status of Military Families; and

Project 3. Health Promotion in Military Families.

The goals of these studies were:

1. To investigate eating patterns in military dependents'

2. To characterize health influencing behaviors (exercise, smoking, alcohol consumption) in the same population;

3. To determine typical levels of traditional cardiovascular (CV) risk factors in the same population; and

4. To develop a CV health promotion model addressing issues of eating, exercise, and general lifestyle in the same population.

From August 1989 through July 1991, studies were implemented at Fort Polk, Louisiana, 15,000 military personnel. Data collection ended on July 25, 1991. The results were evaluated in a preliminary fashion and that evaluation was summarized in the 1991 Annual Report.

In that report, the following conclusions were made:

The process of data collection at Fort Polk has provided a wealth of information for project staff. Aside from a massive amount of CVD risk factor and lifestyle data which will take months to digest, a number of general conclusions have formed.

1. Families in the military largely mirror society in general. Although specific contrasts occur (greater dependence on fast food, more alcohol consumption, increased levels of physical activity) in the bulk of characteristics, Fort Polk Denizens were quite like other Americans.

2. This means, overall, that military families eat too much fat and sodium, are somewhat overweight, smoke too much, and suffer from a number of pervasive stresses. They exhibit unhealthy lipid profiles more often than is acceptable and they consume alcohol at high rates.

3. In this regard they are prime candidates for health promotion.

4. The military provides excellent resources for the delivery of health promotion programs.

5. A multi-focal health promotion is feasible and well accepted by military families.

Our efforts at Fort Polk prove that such programs are needed and possible. A model for delivery is now available for further implementation in a variety of military settings.

In the Appendix are copies of correspondence from Colonel E. Wayne Askew requesting a report from the project leader, Dr. Gerald Berenson, as well as copies of correspondence from the PI to Dr. Berenson indicating that the final report for the Heart Smart Project would be submitted separately from the other projects.

V. Menu Modification Study

A. Introduction and Background

Since 1985, nutrition initiatives have been introduced into the Armed Forces Recipe Service, the Army Master Menu and the Army Food Service Program to provide soldiers with diets lower in sodium, fat, and cholesterol. The Military Nutrition Division of the United States Army Research Institute of Environmental Medicine (USARIEM) has conducted assessments of soldiers' nutrient intakes. These studies resulted in the following nutrition related recommendations: continue revision of the Armed Forces Recipe File to reduce sodium in recipes, continue to decrease the percentage of calories obtained from fat to 35% or less of total calories, and provide soldiers low cholesterol, low fat alternatives to eggs, and evaluate the acceptability and impact of using this approach to moderate soldiers' cholesterol intakes.

The Menu Modification Project incorporates modification of two weeks of Army garrison menus to meet the nutrition targets specified by the Army. The purpose of the Menu Modification Project is to provide healthful, nutritious menu selections which moderate soldier's sodium, fat, and cholesterol intakes.

B. Progress

Initially during this period, a week of Army menus was analyzed using the Extended Table of Nutrient Values for comparative purposes. The menus analyzed and results of the analysis were included in the Quarterly Report of August 1, 1991-October 31, 1991. These data were presented to Army officials and the Committee on Military Nutrition during their September 18-20, 1991 visit to the Pennington Center. In addition, Dr. Catherine Champagne presented the attached data (see Appendix, Quarterly Report 8/1/91-10/31/91) in an Army briefing on Monday, September 23, 1991.

From November 1, 1991-January 31, 1992, breakfast menu items were prepared in batches of 25 in the LSU student cafeteria. The LSU Food Service was unable to prepare the breakfast menu items in batches of 100 so the plan was for this to be completed in the Pennington Biomedical Research Center Quantity Preparation kitchen the following quarter. Quantity preparation of other menu items continued in the student cafeteria on the Louisiana State University campus. The recipes prepared included Italian Meat Sandwich, Italian Vegetable Bake, Beef and Spinach Pita Sandwiches,

Chicken and Spinach Salad.

Twenty-five completed recipes were submitted to the Army for review. Nutritional analysis of recipes was carried out using the Extended Table of Nutrient Values (ETNV).

Data from the 1991 studies were presented at the 89th Annual Meeting of the Southern Association of Agricultural Scientists, Food Science and Human Nutrition Section, February 2-5, 1992, in Lexington, Kentucky. The title of the presentation was "Nutritional Analysis of Seven Days of Modified vs. Regular Army Menus Using the Extended Table of Nutrient Values (ETNV)." The abstract is included in the appendix of the Quarterly Report of February 1-April 30, 1992.

Drs. Ryan and Champagne attended the Research and Development Associates for Military Food and Packaging Systems, Inc.'s (R & DA) 46th Annual Spring Meeting and Exposition held March 23-25, 1992 in Arlington, Virginia. Further details of the meeting are included in the Quarterly Report of February 1-April 30, 1992.

During the February 1, 1992 - April 30, 1992 quarter, initial plans were formulated for changes to the menu modification project. The main focus of the project was in the area of implementation of the project at an actual U.S. garrison such as the facility at Fort Polk, Louisiana.

On May 5, 1992 a culinary research associate, Kevin Gilley, was hired.

Catherine Champagne and Kevin Gilley, accompanied by MAJ Cecilia Thomas, visited the Ft. Polk Installation on June 1, 1992 for purposes of future implementation of the project at that facility. A copy of the trip report can be found in the Quarterly Report of May 1-July 27, 1992.

On June 3, 1992, the Committee on Military Nutrition Research was briefed on the plans for the new Menu Modification Project for 1992-93. A handout was presented to the Committee reviewing the past progress of this research and outlining future plans (for complete report refer to Quarterly Report of May 1-July 27, 1992).

The goals include keeping kilocalorie content of menus similar to current menus while reducing fat content, reducing fat content of menus to 30% of kilocalorie content in keeeping with the Army's proposed updated nutrition standards, reducing cholesterol content of menus to no more than 300 mg/day, and emphasizing efforts to reduce sodium content of recipes/menus, which has been the most difficult task during previous work.

Committee members made several suggestions on methodology for doing garrison dining facility studies using the newly developed

recipes/menus:

1) Consider intermingling new menu days into already existing menu when the study is done rather than study one full week of existing menu then immediately studying a full week of totally new menus (novelty of new menus will confound results).

2) Running the new menus several times in menu cycle then doing study (again to reduce the novelty impact of new menus)

3) Doing periodic acceptance tests of recipes at Ft. Polk or have Ft. Polk personnel periodically come to PBRC to test acceptance of recipes.

Catherine Champagne and Kevin Gilley traveled to Ft. Lee, Va and Natick, Ma to meet with Army recipe developers and menu planners and tour the Quartermster School (ACES). A trip report for these visits is contained in the Quarterly Report of May 1-July 27, 1992.

The main focus of the newly redesigned Menu Modification Project is implementation of the project at an actual U.S. garrison such as the facility at Fort Polk, Louisiana. Kevin Gilley will develop ethnic dishes, breakfast dishes, and other main and side dishes to be potentially incorporated into the Army Master Menu. The need for more ethnic recipes and menus was reemphasized at the Ft. Lee and Natick visits. A benchtop panel of 20 persons with food experience will be utilized to provide guidance in acceptability testing. Overall acceptability testing will consist of a larger panel of 36 members. The nine-point hedonic scale currently used by the military would be the instrument used to test product acceptability.

Once the study is outlined for implementation at Ft. Polk, acceptability will be conducted through a cooperative arrangement with Louisiana Tech University in view of their closer proximity to the facility as compared to Pennington. Graduate students from Louisiana Tech will develop ancillary studies for individual research projects. Catherine Champagne will continue nutritional analysis of modified menus using the Extended Table of Nutrient Values to present data to Army officials and at professional scientific meetings.

C. Conclusions

From previous research and planned future directions for the project, the Menu Modification Project will enable the military to enhance the Armed Forces Recipe File with versatile, healthy, and innovative new items. The focus on developing recipes meeting breakfast needs, as well as including ethnic dishes, addresses

needs expressed by administrators both at the Quartermaster School and Center and at Natick.

APPENDIX

PENNINGTON BIOMEDICAL RESEARCH CENTER
LOUISIANA STATE UNIVERSITY

Interoffice Correspondence

From: Donna Ryan *Date:* June 25, 1992

To: Jim DeLany
Richard Tulley
Cathy Champagne
Nena Cross
Hans Berthoud
Chandan Prasad
Jeff Brock
Gerald Berenson
David Harsha

Re: Quarterly, Annual, and Final Report for U.S. Army Grant

The time is approaching for completion of paperwork for our U.S. Army Grant. To remind you, the grant was extended to a final date of July 27, 1992. While funding will continue for our U.S. Army research, it will be under a new grant and we are required to close out and complete the obligations of this contract in terms of paperwork. Listed below are the reports that are required and the date that they are due.

Quarterly Report for the period May 1 - July 27, 1992 - Due to Donna Ryan August 7, 1992

Annual Report for the period July 28, 1991 - July 27, 1992 - Due August 14, 1992

Final Report for the period July 28, 1988 - July 27, 1992 - Due August 28, 1992

For the Fort Polk Heart Smart Project we are only submitting documentation of publications for the quarterly and annual reports. Please continue to send this information to me. For the final report, we should revise the document that was submitted in August 1992 and erroneously termed the "Final Report." This document should be revised to reflect the final analysis of data, publications that have occurred to date, and publications that are planned from the data.

For the other projects on the grant the report submitted in August 1991 can be modified to reflect an additional year's work.

You may request a copy of your section of the August 1991 report if you need it from Janice Walker. We will follow the same format used for the reports that we have prepared in the past. This format should be familiar to everyone. If you have questions, please call me.

Please mark your calendars now for the above noted important deadlines. Please observe the deadlines that I have listed. I have only allowed a few days from the deadline for me to prepare the final document for distribution to the Army.

jgw

PENNINGTON BIOMEDICAL RESEARCH CENTER
LOUISIANA STATE UNIVERSITY

Interoffice Correspondence

From: Donna Ryan

Date: June 25, 1992

To: Jim DeLany
Richard Tulley
Cathy Champagne
Nena Cross
Hans Berthoud
Chandan Prasad
Jeff Brock
Gerald Berenson
David Harsha

Re: Final Report for U.S. Army Grant

Attached you will find a copy of my June 25, 1992 memorandum to you concerning the U.S. Army reports. Please change the date of the Final Report to the due on August 21, 1992, instead of August 28, 1992. I must have it in to the Army by August 27, 1992. Thank you for your cooperation.

jgw

DEPARTMENT OF THE ARMY
US ARMY RESEARCH INSTITUTE OF ENVIRONMENTAL MEDICINE
NATICK, MASSACHUSETTS 01760-5007

July 20, 1992

Military Nutrition Division

Donna H. Ryan, M.D.
Pennington Biomedical Research Center
6400 Perkins Road
Baton Rouge, Louisiana 70808

Dear Dr. Ryan:

Pursuant to our discussion of the completion of work on grant #DAMD 17-88-Z-8023, I would like to request a final report on the Fort Polk Heart Smart project. At the time of the on-site review, September 19, 1991, Dr. Berenson had not finished analyzing and summarizing all of his data from the final phase of the project.

Since this project was one of the more extensive efforts of this grant and is of considerable importance to the Army, we would like to have a report detailing goals, methods, results, and recommendations. While this information may be eventually published in several journal articles, it would be very useful to us to have a single integrated report of the total project.

Thank you for your assistance.

Sincerely,

Eldon W. Askew, Ph.D.
Colonel, U.S. Army
Grant Officer Representative

Copy Furnished:

Colonel Schnakenberg, Director, Army Systems Hazards,
U.S. Army Medical Research and Development Command

Pennington Biomedical Research Center
LOUISIANA STATE UNIVERSITY

July 28, 1992

COPY

Colonel Askew, Ph.D.
Chief, Military Nutrition Division
U.S. Army Research Institute of Environmental Medicine
Natick, Massachusetts 01760-5007

Dear Colonel Askew:

As you requested in your letter July 20, 1992 I will ask Dr. Gerald Berenson to provide a final report on the Fort Polk Heart Smart Project.

In prior correspondence (copies attached) I have asked for submission of the Fort Polk Heart Smart Project Report as part of the Final Report for Grant #DAMD17-88-Z-8023. However, I will revise this request and ask that Dr. Berenson submit a project report to be provided separately.

Please contact me if I can provide further information or assistance.

Sincerely,

Donna H. Ryan, M.D.
Associate Executive Director

mcl

6400 Perkins Road, Baton Rouge, Louisiana 70808-4124 ♦ Phone: (504) 765-2500, Fax: (504) 765-2525

Pennington Biomedical Research Center
LOUISIANA STATE UNIVERSITY

July 28, 1992

Gerald S. Berenson, M.D.
Director, National Center for
Cardiovascular Health
Tulane School of Public Health
1430 Tulane Avenue
New Orleans, LA 70112-2699

Dear Dr. Berenson:

Please review the attached correspondence. Colonel Askew requests a final report on the Fort Polk Heart Smart Project. Therefore, I will revise my prior request to you (that asked for a final project report to be submitted as part of the overall grant Final Report).

Colonel Askew states in his letter that the project "is of considerable importance to the Army, (and) we would like to have a report detailing goals, methods, results and recommendations."

I spoke to Cathy Champagne today and she assured me that all of the ETNV data had been forwarded to Theresa Nicklas. Please let me know if there is other information that I can provide that will expedite this report.

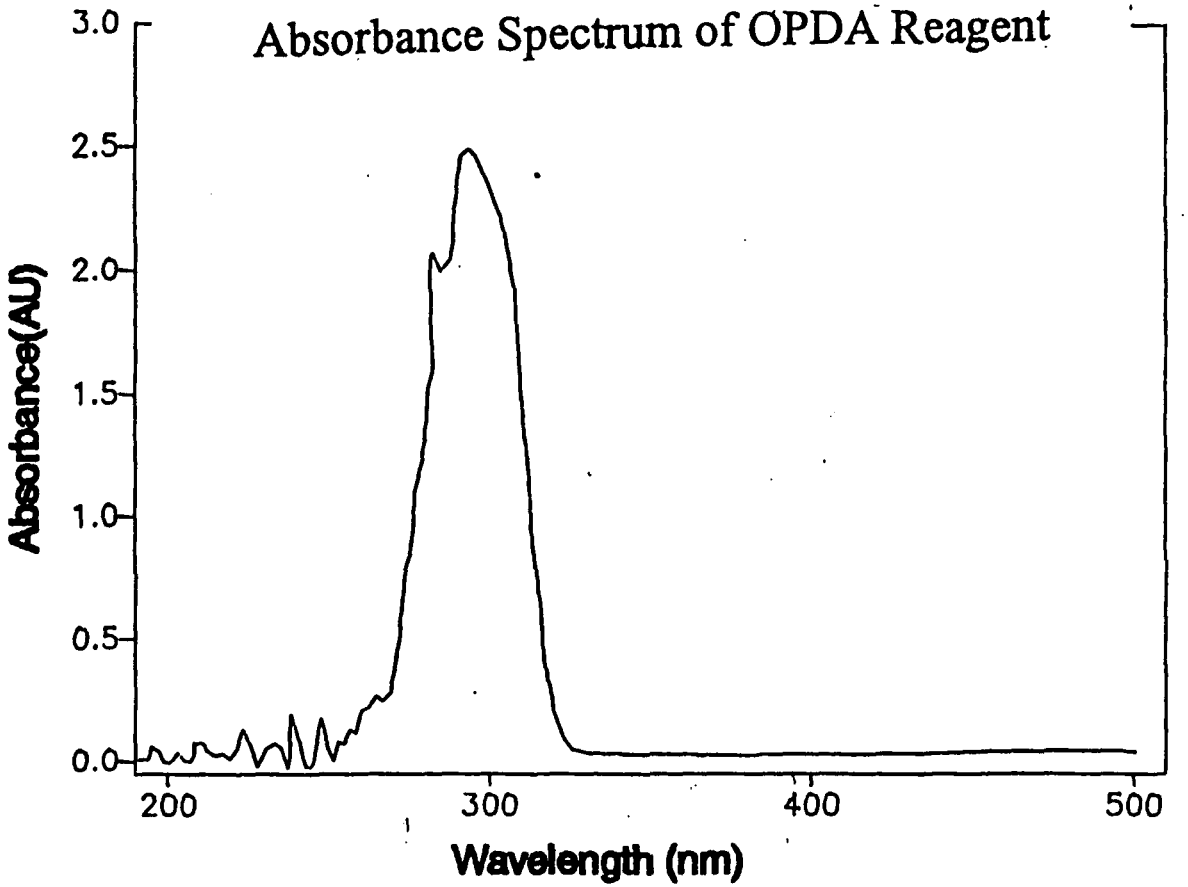
Sincerely,

Donna H. Ryan, M.D.
Associate Executive Director

jgw

cc: Colonel Askew

6400 Perkins Road, Baton Rouge, Louisiana 70808-4124 ♦ Phone: (504) 765-2500, Fax: (504) 765-2525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Abstract Form

For Office Use:

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Perm. # _____

Notes _____

PRESENTING AUTHOR

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Telephone 504-765-2524

TOPIC AREA NUMBER
(See list of topics) ~~05~~

[ ] **New Enzymatic Method for the Analysis of Vitamin C in Plasma and Automation on the Beckman CX5,** Richard Tulley (Clin. Research Lab., Pennington Biomedical Research Ctr, Baton Rouge, LA 70808).[1]

Many methods for the analysis of ascorbic acid (AA) have suffered from lack of specificity, are difficult to automate, may necessitate the performance of double reaction schemes to remove interferences by dehydroascorbic acid (DHAA) or other substances, or require the use of corrosive reagents. HPLC methods have shown good sensitivity and specificity, but are somewhat lengthy and difficult to automate. O-phenylenediamine (OPDA) has been used as a fluorescent reagent for the analysis of AA, however, because it reacts with DHAA and other substances, two analyses must be performed to determine AA free from interferences. I have developed a new rate method for the analysis of vitamin C using ascorbate oxidase (AO) and have successfully automated this method on the Beckman Synchron CX5. With this method total ascorbic acid can be measured in a single analysis.

In this procedure AA is oxidized by ascorbate oxidase to DHAA, which then reacts with OPDA to form the quinoxamine derivative. This product is then measured at 340 nm. OPDA drives the reaction to completion and allows the removal of interfering substances prior to the addition of AO. Optimal conditions have been determined; these include the use of final concentrations of 0.4 g/L OPDA and 1.7 mg/L AO in pH 6.5 phosphate buffer. Calibration is performed using 5 and 20 mg/L aqueous standards. Linearity is up to 200 mg/L. Stabilization of sample is achieved by the addition of 50 ul of metaphosphoric acid/dithiothreitol (400 g/L/8.25 g/L) to 500 ul of heparinized plasma followed by centrifugation. Samples may be stored for extended periods of time at -70° C prior to treatment. Recovery is 94% with a CV of 6% at 13.4 mg/L.

[1] This work was supported by the US Army Research and Development Command. Opinions, interpretations and conclusions and recommendations are those of the author and are not necessarily endorsed by the US Army.

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1992 ABSTRACTS
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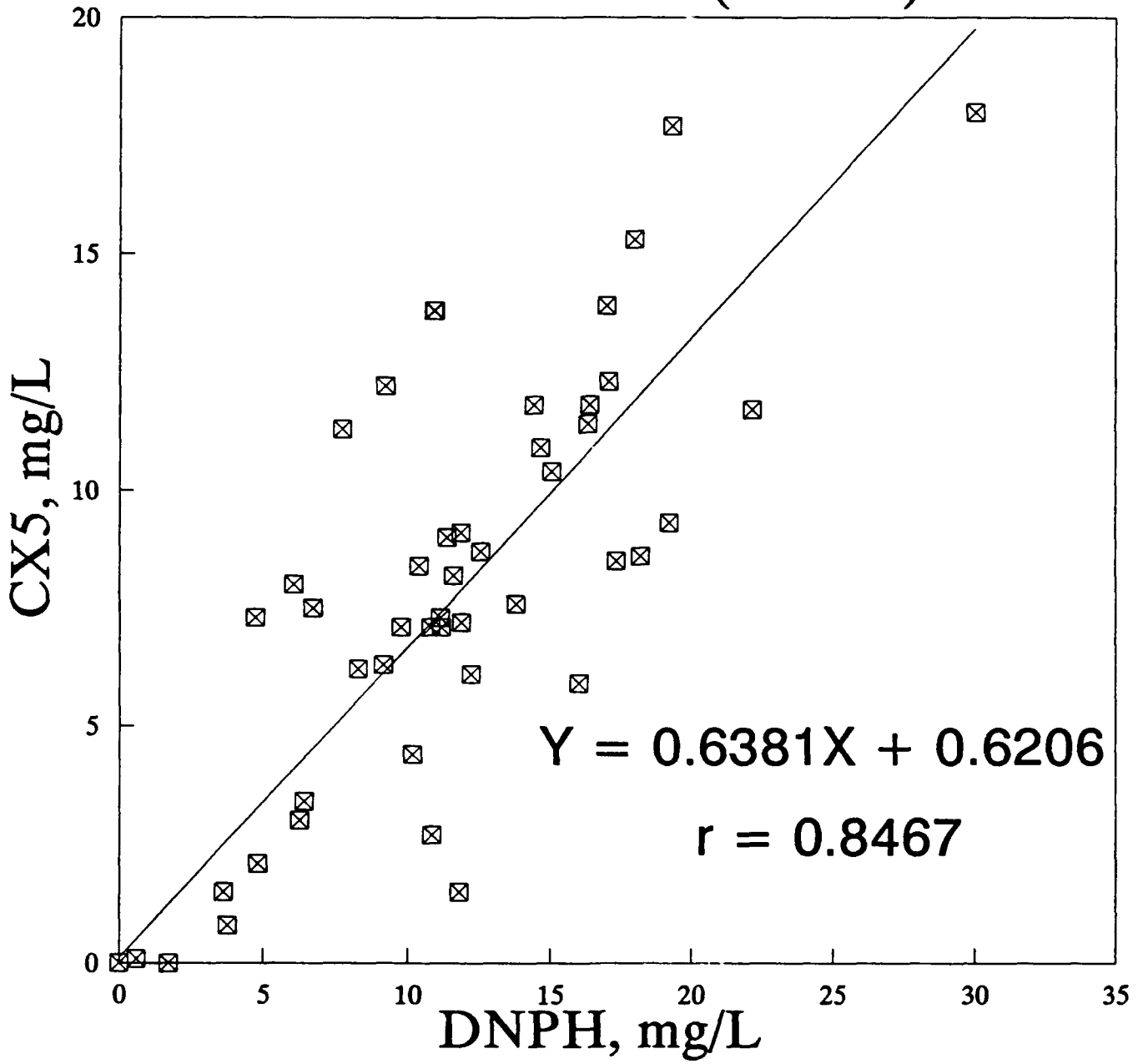
Signature Richard Tulley
Presenting Author

ASCORBIC ACID

CX5 vs Manual (DNPH)

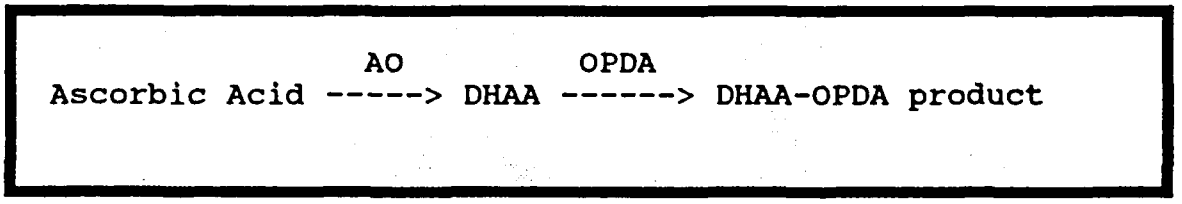


Procedure Adopted: 6-29-92
Prepared By: K. Mulley PhD
Title: Clin. Res. Lab Director

CLINICAL RESEARCH LABORATORY
PENNINGTON BIOMEDICAL RESEARCH CENTER

2.33 VITAMIN C in Serum (VITC)
Beckman Synchron CX5

2.33 A. PRINCIPLE: In this method, Vitamin C (ascorbic acid) is oxidized by ascorbate oxidase (AO) to Dehydroascorbic Acid (DHAA). The product is analyzed by reacting it with o-phenylenediamine (OPDA) at pH 6.5. The resulting product absorbs at 340 nm. Interfering substances (and any DHAA in the sample) which react with OPDA are eliminated by performing the reaction for five minutes prior to addition of the ascorbate oxidase. Ascorbate Oxidase is then added and the rate of the reaction for the next five minutes is monitored. This rate is proportional to the amount of Vitamin C present in the sample. The reaction scheme is shown below:



Degradation of the ascorbic acid in plasma is rapid. It is oxidized readily to DHAA. To prevent this, a mixture of metaphosphoric acid (MPA) and dithiothreitol (DTT) is added prior to the analysis of the sample. The DTT effectively reduces DHAA to ascorbic acid and the MPA deproteinizes the sample to prevent further oxidation. In this method, neither of these compounds are in enough quantity to interfere with the ascorbate oxidase or the reaction with OPDA.

2.33 B. SPECIMEN: Heparinized plasma is the sample of choice. Collect blood in a green top vacutainer tube, mix well, and centrifuge immediately at 5° C. Separate the plasma. If the sample is to be analyzed immediately, follow the sample preparation instruction in the **Procedure** section below. If the sample is not to be analyzed immediately it may be stored safely at -70° C in cryovials. At the time of analysis, thaw the sample at room

temperature (DO NOT HEAT THE CONTROLS IN A WATER BATH OR AT AN ELEVATED TEMPERATURE.)

2.33 C. REAGENTS: Reagents are made at PBRC from analytical grade reagents.

Phosphate Buffer (0.1 mol/L, pH 6.5) - Weigh 11.5470 grams of NaH_2PO_4 (Sodium Phosphate Monobasic) (Mallinkrodt, Catalog #7892) and 3.8853 grams of Na_2HPO_4 (Sodium Phosphate Dibasic Heptahydrate) (Mallinkrodt, Catalog #7914). Dissolve in approximately 800 ml of deionized water in a 1000 ml beaker. With stirring, adjust the pH to 6.5 with hydrochloric acid or sodium hydroxide solution. Transfer to a 1000 ml volumetric flask and fill to the mark with deionized water. Store in a plastic bottle. Stable one year when stored refrigerated at 4° C.

NaH_2PO_4 - 11.5470 g (0.8368 mol/L)
Na_2HPO_4 - 3.8853 g (0.1632 mol/L)

OPDA (0.5 g/L) - Weigh 0.0500 g o-phenylenediamine dihydrochloride (Sigma, Catalog #P1526) (stored in white freezer). Transfer to a 100 ml volumetric flask and dissolve in pH 6.5 phosphate buffer (above) and dilute to the mark with pH 6.5 phosphate buffer. Store in an amber bottle refrigerated at 4° C. Reagent is stable for at least a month when stored this way or on the CX5. Perform calibration and QC checks to verify stability. This reagent can be poured into Compartment A of the VITC reagent cartridge.

Ascorbate Oxidase Stock Solution (1 mg/ml) - Add X ml of deionized water to a vial containing X mg of ascorbate oxidase (Sigma, Catalog Number A0157, 1000 Units). For example, 5 ml of water should be added to a vial containing 5 mg of ascorbate oxidase; 4 ml for a vial containing 4 mg, etc. The water may need to be added in increments if the vial is not big enough to contain the entire volume. Mix well and aliquot 200 ul into cryovials. Store at -70° C.

Ascorbate Oxidase Working Solution (0.04 g/ml) - Thaw a vial of ascorbate oxidase stock solution. Pipet 4.8 ml of phosphate buffer, pH 6.5, into a test tube. Pour a small amount of the buffer into the vial (1-1.5 ml); mix and transfer this into the test tube containing the remaining buffer. Repeat this procedure several times until all of the ascorbate oxidase has been dissolved in the buffer. This solution should be mixed well by inversion and transferred to Compartment C of the VITC reagent cartridge. Stable for at least a month on the instrument. Perform calibration and QC checks to verify stability.

MPA/DTT Solution, 400/8.25 g/L, respectively-Weigh 4.0 g of Metaphosphoric Acid (Aldrich, Catalog #23,927-5) and 0.08250 g of Dithiothreitol (stored in white refrigerator)(Sigma, Catalog #D0632) and transfer both to a 50 ml beaker. On a magnetic stirrer, mix with approximately 7 ml of deionized water. When dissolved, transfer the contents to a 10 ml volumetric flask and fill to the mark with deionized water. Prepare fresh each day of use.

Ascorbic Acid Standards

Stock 500 mg/L - weigh 0.0500 g of ascorbic acid (Sigma, Free Acid, Catalog #A0278), transfer to a 100 ml volumetric flask. Dissolve in a small amount of deionized water, add 10 ml of MPA/DTT solution, and fill to the mark with deionized water. Mix well and store at 4° C. **Note:** This can be made without MPA/DTT if the calibration standards are prepared immediately, and they are made with MPA/DTT.

Linearity and Calibration Solutions, 100, 80, 60, 40, 20, 10, 5, and 2.5 mg/L - Into separate 10 ml volumetric flasks pipet the volumes of the 500 mg/L Stock Standard shown in the table below. Add 1 ml of MPA/DTT solution and fill to the mark with deionized water. Store refrigerated at 4° C. Use the 5 and 20 mg/L standards for calibration.

Concentration	Volume of Stock
100 mg/L	2.0 ml
80 mg/L	1.6 ml
60 mg/L	1.2 ml
40 mg/L	800 ul
20 mg/L	**400 ul**
10 mg/L	200 ul
5 mg/L	**100 ul**
2.5 mg/L	50 ul

2.33 D. CALIBRATION: Calibrate the CX5 using the 5 and 20 mg/L ascorbic acid standards. Calibration is stable for several days. The calibration of the 20 mg/L standard should have a REACTION reading of approximately 0.005-0.006. The calibration factor should be approximately 3000-4000.

2.33 E. QUALITY CONTROL: Controls for Vitamin C are prepared from Bio Rad I and II Unassayed Serum Chemistry Controls. Since there is little or no Vitamin C in these controls, we must prepare our own controls by spiking these controls with Vitamin C and treating them with MPA/DTT solution.

Reconstitute 2 vials each of Bio Rad I and II with 10 ml of deionized water for each vial. After the solutions are reconstituted, combine both vials of Level I in a small beaker and both vials of Level II in another beaker. To Level I add 200 ul of the 500 mg/L ascorbic acid stock standard. To Level II add 600 ul of the 500 mg/L ascorbic acid stock standard. Mix each beaker well using a magnetic stirrer. Pipet 5 ml of each level into 4 separate test tubes for each level. To these add 500 ul of MPA/DTT solution. Vortex each tube and centrifuge for 10 minutes at 4000 rpm. Pipet the supernatant from each tube into another test tube and filter these through Tip Top filters (Helena). Aliquot 500 ul of each filtrate into cryovials for Levels I and II. Store these at -70° C until use. When used, thaw these controls at room temperature. Do not use the water bath or an elevated temperature. This causes more proteins to precipitate and erroneous values to be obtained. Perform quality control measurements each day of analysis to verify reagents and method integrity. Since these have already been treated with MPA/DTT do not re-treat these samples with MPA/DTT. Analyze these directly.

2.33 F. PROCEDURE: For each sample to be analyzed, in a 10x75 test tube, pipet 500 ul of heparinized plasma. Add to this, 50 ul of MPA/DTT solution, vortex well, and centrifuge at 3000 rpm for 10 minutes. Pipet the supernatant into small cups for analysis on the CX5. After calibrating and performing QC procedures, run these samples using the VITC method on the instrument. The dilution of the sample is corrected for by a slope of 1.1 on the instrument and need not be accounted for.

2.33 G. CALCULATIONS: Verify that the CX5 is set up to have a slope adjustment of 1.1 in the CAL OPTIONS screen. Pres [F3 CAL], [F6 CAL OPTIONS], press 4 [SLOPE/OFFSET] and press [ENTER]. Press [Page Down] until Vitamin C is listed. Verify that 1.1 is entered in the Slope column and the 0.0 in the Offset column. This factor will automatically correct samples for the dilution factor of 1:11. Otherwise, no calculations are required.

2.33 H. REPORTING RESULTS: Results are reported as obtained from the CX5.

2.33 I. PROCEDURE NOTES: The use of MPA/DTT reduces all DHAA back to ascorbic acid and stabilizes it. Samples do not need to be stored with MPA/DTT as long as they are stored at -70° C. Plasma may be treated with MPA/DTT and then stored, however, they should be thawed at room temperature and should not be treated with more MPA/DTT before analysis. Too much MPA/DTT interferes with the

reaction, either resulting in falsely high or low values or a "RESULTS SUPPRESSED" message. Therefore, to prevent confusion, it is recommended that samples be stored untreated and treated with MPA/DTT immediately prior to analysis.

2.33 J. LIMITATIONS & INTERFERENCES: Other than the interference by excess MPA/DTT, no interferences are known at this time. Most interferences in the sample should be corrected for by the blanking reaction with OPDA only.

2.33 K. REFERENCES:

1. Pachla LA, Reynolds DL, and Kissinger PT. Analytical methods for determining ascorbic acid in biological samples, food products, and pharmaceuticals. J Assoc Official Analyt Chemists 1985; 68:1-12.

2. Liu TZ, Chin N, Kiser MD, and Bigler WN. Specific spectrophotometry of ascorbic acid in serum or plasma by use of ascorbate oxidase. Clin Chem 1982; 28:2225-2228.

3. Deutsch MJ and Weeks CE. Microfluorometric assay for vitamin c. J Assoc Official Analyt Chemists 1965; 6:1248-1249.

4. Tulley RT. New enzymatic method for the analysis of vitamin c in plasma and automation on the beckman cx5. Clin Chem 1992; 38:1070.

2.33 L. SUPPLEMENTAL MATERIALS:

None

2.33 M. REVIEW:

Vitamin C (VITC)

Prepared: June 1992 By: Richard Tulley, Ph.D.
Director
Clinical Research Laboratory

Richard Tulley PhD 6-29-92
(Signature/Date)

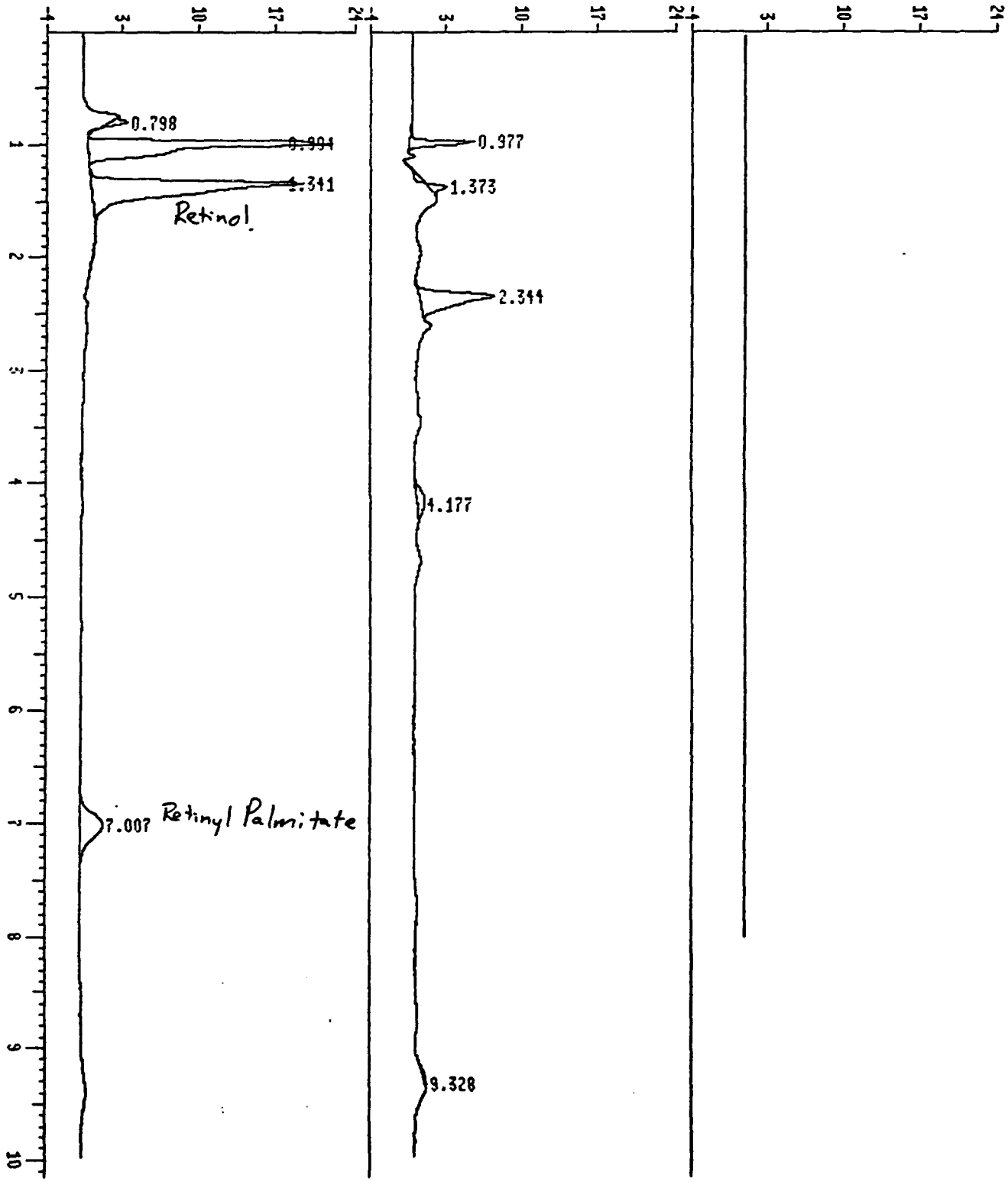
Reviewed:

Date	By	Notes

RETINOL CHROMATOGRAM

10-25-91
Precision Studies Retinol
and Retinyl Palmitate

1: LC A 320,4 550,100 of 1025A10A.D
2: LC B 450,4 550,100 of 1025A10A.D
3: LC X FLUORESCENCE of 1025A10A.D



End of plot. Time = 0.02 to 9.98 minutes Chart speed = 1.94 cm/min

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Baton Rouge, LA 70808-4124

Telephone 504-765-2524

TOPIC AREA NUMBER
(See list of topics) 05

[ ] **Erythrocyte Enzyme Assays as Markers of Nutritional Status on the Beckman CX5,** Deonne Bodin and Richard Tulley (Clin. Research Lab., Pennington Biomedical Research Ctr, Baton Rouge, LA 70808)(spon. Richard Tulley).[1]

Erythrocyte levels of the enzymes aspartate aminotransferase (EAST), glutathione reductase (EGR), and transketolase (ETK) have been used as markers for vitamins B_6 (pyridoxal phosphate)(P5P), B_2 (riboflavin) (FAD), and B_1 (thiamine)(TPP), respectively, because each of these enzymes requires the corresponding vitamin as a cofactor. Also, in vitro addition of these cofactors to samples prior to analysis results in enhancement of the respective enzyme activity. The degree of this enhancement or activation has been correlated to the nutritional vitamin status of individuals. These assays may be indications of long term vitamin status compared to plasma vitamin assays which may reflect short term status. We have adapted methods by Bayoumi [Clin. Chem. 22, 327-335 (1976)] for the analysis of these enzymes on the Beckman Synchron CX5 with in vitro activation by addition of their respective cofactors.

In this procedure a red cell hemolysate adjusted to approximately 1.0 g/dL hemoglobin is used in the assay of each of the erythrocyte enzymes with (+) and without (-) the addition of the cofactor. For EAST activity the Beckman AST cartridge is programmed as a user defined chemistry, using separate samples for EAST+ and EAST-. The procedure uses a pre-treatment of the hemolysate with P5P (EAST+) or buffer (EAST-). Procedures for EGR and ETK measure the hemolysate directly. EGR+ reagent contains buffer, EDTA, and oxidized glutathione in compartment A, FAD or water (EGR-) in B, and NADPH in C. ETK+ reagent consists of ribose 5 phosphate, glycerol dehydrogenase/triose phosphate isomerase, and NADH in A and TPP or water (ETK-) in C. All of the assays are measured at 340 nm over five minutes using Rate 1 reactions.

[1] This work was supported by the US Army Research and Development Command. Opinions, interpretations and conclusions and recommendations are those of the author and are not necessarily endorsed by the US Army.

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Signature Richard Tulley
Presenting Author

ERYTHROCYTE AST SETUP

04 Jan 9.
12:09:46
Page 1

SYNCHRON CXS

USER DEFINED CHEMISTRIES

USER ID#: 11

Test Name: EAST
Reaction Type: [RATE 1]
Reaction Direction: [NEGATIVE]
Units: [IU/L]
Decimal Precision: [X.XX]

Calculation Factor: 3817
Math Model: [LINEAR]
Cal Time Limit: 336 hr
No. of Calibrators: 0

Primary Wavelength: [340] nm
Secondary Wavelength: [700] nm

Sample Volume: 33 uL
Primary Inject Rgt:
A: 242 uL
B: 8 uL

CALIBRATORS

MULTIPOINT SPAN

REAGENT BLANK

Start Read: 250 sec
End Read: 300 sec
Low ABS Limit: -1.500
High ABS Limit: 1.500

REACTION

Start Read: 32 sec
End Read: 300 sec
Low ABS Limit: -1.500
High ABS Limit: 1.500

USABLE RANGE

Lower Limit: 0.00
Upper Limit: 99999.00

SUBSTRATE DEPLETION

Initial Rate: -99.999
Delta ABS: 1.500

RECOVERY/SENSITIVITY

ERYTHOCYTE GLUTATHIONE REDUCTASE
IN VITRO STIMULATED (POSITIVE)

SYNCHRON CX5

USER DEFINED CHEMISTRIES

USER ID#: 12

Test Name:	EGRP	Calculation Factor:	10538
Reaction Type:	[RATE 1]	Math Model:	[LINEAR]
Reaction Direction:	[NEGATIVE]	Cal Time Limit:	336 hr
Units:	[IU/L]	No. of Calibrators:	0
Decimal Precision:	[X.XX]		

Primary Wavelength: [340] nm Secondary Wavelength: [380] nm

Sample Volume: 10 uL
Primary Inject Rgt:
A: 215 uL
B: 10 uL
Secondary Inject Rgt:
C: 10 uL
Add Time: 720 sec

CALIBRATORS

MULTIPOINT SPAN

REAGENT BLANK

Start Read:	336 sec
End Read:	368 sec
Low ABS Limit:	-1.500
High ABS Limit:	1.500

REACTION

Start Read:	452 sec
End Read:	720 sec
Low ABS Limit:	-1.500
High ABS Limit:	1.500

USABLE RANGE

Lower Limit:	0.00
Upper Limit:	99999.00

SUBSTRATE DEPLETION

Initial Rate:	-99.999
Delta ABS:	1.500

RECOVERY/SENSITIVITY

ERYTHROCYTE GLUTATHIONE REDUCTASE
NOT STIMULATED (NEGATIVE)

SYNCHRON CX5

USER DEFINED CHEMISTRIES

USER ID#: 13

Test Name:	EGRN	Calculation Factor:	10538
Reaction Type:	[RATE 1]	Math Model:	[LINEAR]
Reaction Direction:	[NEGATIVE]	Cal Time Limit:	336 hr
Units:	[IU/L]	No. of Calibrators:	0
Decimal Precision:	[X.XX]		

Primary Wavelength: [340] nm Secondary wavelength: [380] nm

Sample Volume: 10 uL
Primary Inject Rgt:
A: 215 uL
B: 10 uL
Secondary Inject Rgt:
C: 10 uL
Add Time: 720 sec

CALIBRATORS

MULTIPOINT SPAN

REAGENT BLANK

Start Read:	336 sec
End Read:	368 sec
Low ABS Limit:	-1.500
High ABS Limit:	1.500

REACTION

Start Read:	452 sec
End Read:	720 sec
Low ABS Limit:	-1.500
High ABS Limit:	1.500

USABLE RANGE

Lower Limit:	0.00
Upper Limit:	99999.00

SUBSTRATE DEPLETION

Initial Rate:	-99.999
Delta ABS:	1.500

RECOVERY/SENSITIVITY

ERYTHROCYTE TRANSKETOLASE
IN VITRO STIMULATED (POSITIVE)

SYNCHRON CX5

USER DEFINED CHEMISTRIES

USER ID#: 14

Test Name: ETKP
Reaction Type: [RATE 1]
Reaction Direction: [NEGATIVE]
Units: [IU/L]
Decimal Precision: [X.XX]

Calculation Factor: 3614
Math Model: [LINEAR]
Cal Time Limit: 336 hr
No. of Calibrators: 0

Primary Wavelength: [340] nm
Secondary Wavelength: [380] nm

Sample Volume: 25 uL
Primary Inject Rgt:
A: 246 uL
C: 10 uL

CALIBRATORS

MULTIPOINT SPAN

REAGENT BLANK

Start Read: 272 sec
End Read: 304 sec
Low ABS Limit: -1.500
High ABS Limit: 1.500

REACTION

Start Read: 420 sec
End Read: 720 sec
Low ABS Limit: -1.500
High ABS Limit: 1.500

USABLE RANGE

Lower Limit: 0.00
Upper Limit: 99999.00

SUBSTRATE DEPLETION

Initial Rate: -99.999
Delta ABS: 1.500

RECOVERY/SENSITIVITY

ERYTHROCYTE TRANSKETOLASE
NOT STIMULATED (NEGATIVE)

SYNCHRON CxS

USER DEFINED CHEMISTRIES

USER ID#: 15

Test Name:	ETKN	Calculation Factor:	3614
Reaction Type:	[RATE 1]	Math Model:	[LINEAR]
Reaction Direction:	[NEGATIVE]	Cal Time Limit:	336 hr
Units:	[IU/L]	No. of Calibrators:	0
Decimal Precision:	[X.XX]		

Primary Wavelength: [340] nm Secondary Wavelength: [380] nm

Sample Volume: 25 uL
Primary Inject Rgt:
A: 246 uL
D: 10 uL

CALIBRATORS

MULTIPOINT SPAN

REAGENT BLANK

Start Read:	272 sec
End Read:	304 sec
Low ABS Limit:	-1.500
High ABS Limit:	1.500

REACTION

Start Read:	420 sec
End Read:	720 sec
Low ABS Limit:	-1.500
High ABS Limit:	1.500

USABLE RANGE

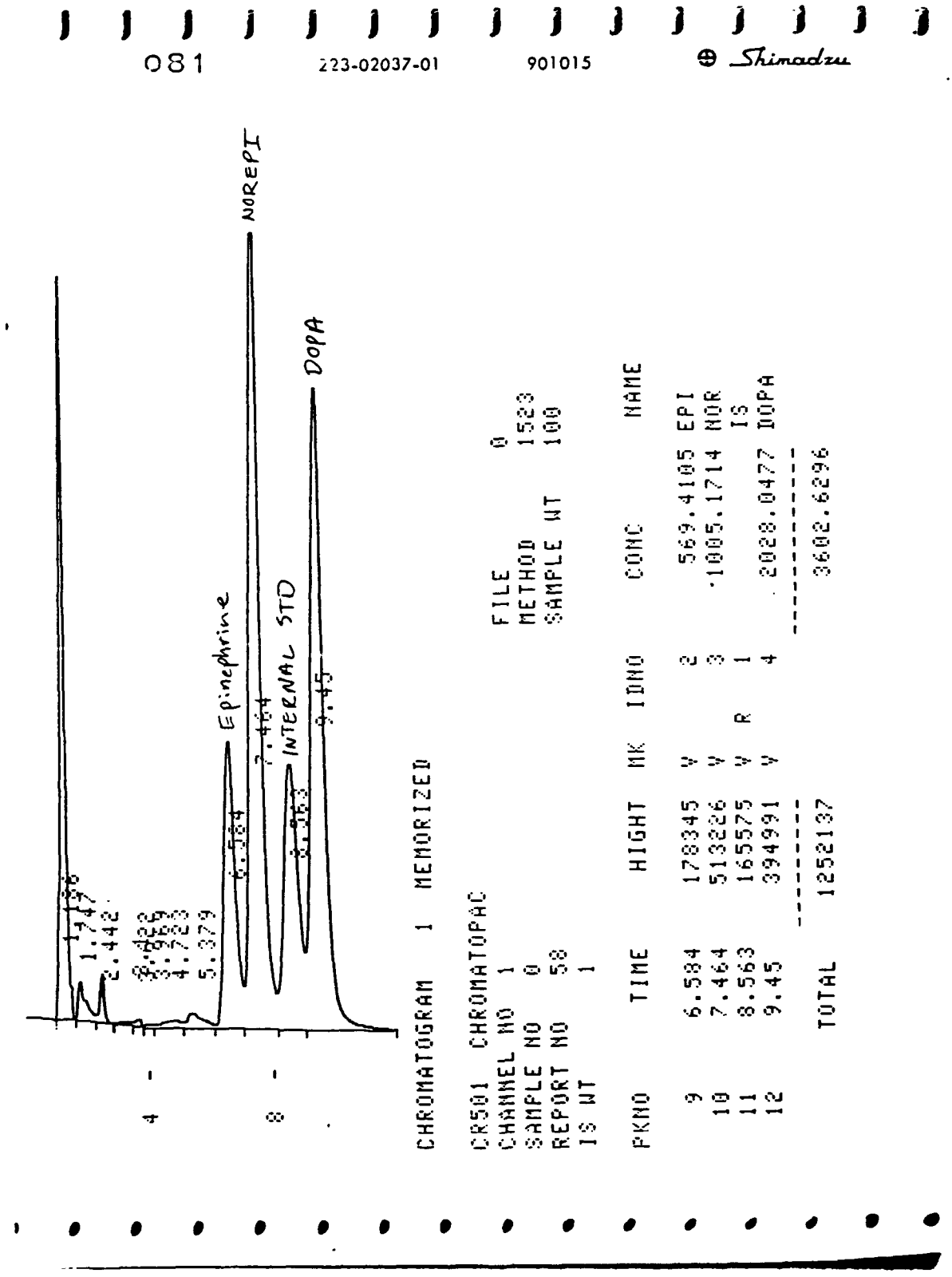
Lower Limit:	0.00
Upper Limit:	99999.00

SUBSTRATE DEPLETION

Initial Rate:	-99.999
Delta ABS:	1.500

RECOVERY/SENSITIVITY

CATECHOLAMINE CHROMATOGRAM



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1
SAMPLE NO 0
REPORT NO 58
IS WT 1

FILE 0
METHOD 1523
SAMPLE WT 100

PKNO	TIME	HIGHT	MK	IDNO	CONC	NAME
9	6.584	178345	V	2	569.4105	EPI
10	7.464	513226	V	3	1005.1714	NOR
11	8.563	165575	V	R 1		IS
12	9.45	394991	V	4	2028.0477	DOPA
	TOTAL	1252137			3602.6296	

1 9 9 1

COMPREHENSIVE CHEMISTRY

E V A L U A T I O N

SURVEY SET: C - B
CAP NUMBER: 38988-01-01-01 KIT# 01
ATTENTION:
INSTITUTION: PENNINGTON BIOMEDICAL RSCH CTR

KIT MAILED: 6/24/91
QUEST. EVAL: 10/07/91

CONSTITUENT / UNIT OF MEASURE / YOUR REPORTED METHOD / COMPARATIVE METHOD	SPECIMEN	YOUR RESULT	EVAL CODE	MEAN	SD	NO. LABS	SDI	LIMITS OF ACCEPTABILITY LOWER - UPPER	QTR	PLOTS OF THE RELATIVE DISTANCE OF YOUR RESULTS FROM TARGETS AS PERCENTAGES OF ALLOWED DEVIATION (-100=LOWER LIMIT, 0=TARGET, +100=UPPER LIMIT) -100 -75 -50 -25 0 25 50 75 100
ALBUMIN	C-11	4.2	13	4.20	.11	279	+0.0	3.7 - 4.7	91B	
G/DL	C-12	3.1	13	3.02	.08	283	+1.0	2.7 - 3.4		
DYE BINDING-BCP	C-13	3.8	13	3.69	.10	279	+1.1	3.3 - 4.1		
BECKMAN SYNCHRON CX4/5	C-14	4.0	13	3.94	.12	277	+0.5	3.5 - 4.4	91A	
	C-15	2.8	13	2.82	.08	278	-0.3	2.5 - 3.1		
	C-11			4.25	.20	535	-0.3			
DYE BINDING-BCG W/RA	C-12			3.12	.18	538	-0.1			
ALL INSTRUMENTS	C-13			3.79	.19	537	+0.1			
	C-14			4.03	.20	534	-0.2			
	C-15			2.94	.17	532	-0.8			
BILIRUBIN, TOTAL	C-11	1.5	13	1.57	.08	240	-0.9	1.2 - 1.9	91B	
MG/DL	C-12	5.1	13	4.79	.29	244	+1.1	3.8 - 5.8		
DIAZO J-G W/O BLANK	C-13	5.2	13	5.14	.17	240	+0.4	4.1 - 6.2		
BECKMAN SYNCHRON CX4/5	C-14	5.5	13	5.46	.17	240	+0.2	4.3 - 6.6	91A	
	C-15	1.2	13	1.19	.07	241	+0.1	.8 - 1.5		
	C-11			1.37	.15	5022	+0.9			
ALL METHOD PRINCIPLES	C-12			4.76	.46	5109	+0.7			
ALL INSTRUMENTS	C-13			4.96	.40	5090	+0.6			
	C-14			5.28	.43	5117	+0.5			
	C-15			1.01	.12	5046	+1.6			
CALCIUM-SERUM	C-11			9.29	.20	248	+1.6		91B	
MG/DL	C-12			11.45	.29	252	+0.9			
ARSENAZO III DYE	C-13			13.09	.34	251	+0.6			
BECKMAN SYNCHRON CX4/5	C-14			13.23	.33	248	+1.1		91A	
	C-15			9.78	.26	246	+0.8			
	C-11	9.6	14	8.88	.32	5164	(+2.3)*	7.8 - 9.9		
ALL METHOD PRINCIPLES	C-12	11.7	14	11.25	.35	5144	+1.3	10.2 - 12.3		
ALL INSTRUMENTS	C-13	13.3	14	13.04	.48	5168	+0.5	12.0 - 14.1		
	C-14	13.6	14	13.23	.47	5157	+0.8	12.2 - 14.3		
	C-15	10.0	14	9.61	.30	5113	+1.3	8.6 - 10.7		

*Value agrees OK w/ CK Results.

11-11-91
PT

1 9 9 1

COMPREHENSIVE CHEMISTRY

E V A L U A T I O N

CAP NUMBER: 38988-01-01-01 KIT# 01

CONSTITUENT / UNIT OF MEASURE / YOUR REPORTED METHOD / COMPARATIVE METHOD	SPECIMEN	YOUR RESULT	EVAL CODE	MEAN	SD	NO. LABS	SDI	LIMITS OF ACCEPTABILITY LOWER	UPPER	PLOTS OF THE RELATIVE DISTANCE OF YOUR RESULTS FROM TARGETS AS PERCENTAGES OF ALLOWED DEVIATION (-100=LOWER LIMIT, 0=TARGET, +100=UPPER LIMIT) QTR	-100 -75 -50 -25 0 25 50 75 100
IONIZED CALCIUM	C-11									91B	
MMOL/L	C-12									METHOD	
NOT GIVEN	C-13									CHANGE	
NOT GIVEN										91A	
NO COMPARATIVE METHOD	C-11										
	C-12										
	C-13										
CHLORIDE	C-11			110.5	1.8	214	+0.3			91B	
MMOL/L	C-12			92.0	1.3	216	+0.8				
ION SELEC./DILUTED	C-13			120.7	1.9	214	+0.2				
BECKMAN SYNCHRON CX4/5	C-14			127.7	2.6	216	+0.1			91A	
	C-15			97.9	1.4	214	+0.1				
ALL CHLORIDE COMMON GP	C-11	111	14	110.6	3.1	1025	+0.1	105 -	117		
ALL AUTO CHEM INSTR	C-12	93	14	93.5	2.9	1018	-0.2	88 -	99		
	C-13	121	14	119.3	3.1	1019	+0.5	113 -	126		
	C-14	128	14	125.1	3.5	1021	+0.8	118 -	132		
	C-15	98	14	98.0	2.3	1015	+0.0	93 -	103		
CO2	C-11	26	10	28.6	1.3	213	-2.0			91B	
MMOL/L	C-12	15	10	15.1	.8	215	-0.1				
ION SELEC./DILUTED	C-13	27	10	27.7	1.0	214	-0.7				
BECKMAN SYNCHRON CX4/5										91A	
NO COMPARATIVE METHOD	C-11										
	C-12										
	C-13										

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THE AMERICAN PATHOLOGISTS RECOMMENDS THAT THE RESULTS OF THIS INTERLABORATORY COMPARISON NOT BE USED AS A SOLE CRITERION FOR JUDGING THE PERFORMANCE OF ANY INDIVIDUAL CLINICAL LABORATORY

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COMPREHENSIVE CHEMISTRY

E V A L U A T I O N

CAP NUMBER: 38988-01-01-01 KIT# 01

CONSTITUENT / UNIT OF MEASURE / YOUR REPORTED METHOD / COMPARATIVE METHOD	SPECIMEN	YOUR RESULT	EVAL CODE	MEAN	SD	NO. LABS	SDI	LIMITS OF ACCEPTABILITY LOWER	UPPER	PLOTS OF THE RELATIVE DISTANCE OF YOUR RESULTS FROM TARGETS AS PERCENTAGES OF ALLOWED DEVIATION (-100=LOWER LIMIT, 0=TARGET, +100=UPPER LIMIT) QTR	-100	-75	-50	-25	0	25	50	75	100
CORTISOL - SERUM	C-11									91B							112		1
MCG/DL	C-12																		
TEST NOT PERFORMED	C-13																		
	C-14									91A					122				
	C-15																		
NO COMPARATIVE METHOD	C-11																		
	C-12																		
	C-13																		
	C-14																		
	C-15																		
CREATININE-SERUM	C-11			1.50	.07	179	+0.0			91B					23				
MG/DL	C-12			4.88	.13	175	+0.9												
KINETIC ALK. PICRATE	C-13			4.97	.13	177	+1.0												
BECKMAN SYNCHRON CX4/5	C-14			5.05	.13	175	+1.2			91A				3	- - - - -	2			
	C-15			1.10	.06	174	+0.0												
ALL METHOD PRINCIPLES	C-11	1.5	14	1.52	.15	5575	-0.1	1.2	- 1.9										
ALL INSTRUMENTS	C-12	5.0	14	5.01	.25	5548	+0.0	4.2	- 5.8										
	C-13	5.1	14	5.12	.26	5542	-0.1	4.3	- 5.9										
	C-14	5.2	14	5.25	.28	5558	-0.2	4.4	- 6.1										
	C-15	1.1	14	1.10	.12	5538	+0.0	.8	- 1.4										
GLUCOSE-SERUM	C-11			105.1	2.2	196	+0.0			91B							112	- - -	1
MG/DL	C-12			245.7	5.0	194	+0.9												
HEXOKINASE, UV	C-13			294.5	6.1	194	+0.2												
BECKMAN SYNCHRON CX4/5	C-14			302.3	7.3	196	+0.1			91A					122				
	C-15			103.9	2.4	195	+0.0												
GLU OXIDASE O2 ELEC	C-11	105	14	98.8	2.6	841	(+2.4)*	88	- 109										
ALL AUTO CHEM INSTR	C-12	250	14	239.7	5.1	841	+2.0 *	215	- 264										
	C-13	296	14	284.4	6.2	836	+1.9	256	- 313										
	C-14	303	14	293.4	6.1	834	+1.6	264	- 323										
	C-15	104	14	100.1	2.5	839	+1.6	90	- 111										

* Value agrees well with Cx Results

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COMPREHENSIVE CHEMISTRY

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CAP NUMBER: 38988-01-01-01 KIT# 01

CONSTITUENT / UNIT OF MEASURE / YOUR REPORTED METHOD / COMPARATIVE METHOD	SPECIMEN	YOUR RESULT	EVAL CODE	MEAN	SD	NO. LABS	SDI	LIMITS OF ACCEPTABILITY LOWER	UPPER	PLOTS OF THE RELATIVE DISTANCE OF YOUR RESULTS FROM TARGETS AS PERCENTAGES OF ALLOWED DEVIATION -100=LOWER LIMIT 0=TARGET +100=UPPER LIMIT QTR	-100 -75 -50 -25 0 25 50 75 100
IRON	C-11	205	13	203.6	5.6	115	+0.3	162 -	245	91B	
MCG/DL	C-12	86	13	85.8	3.6	111	+0.1	68 -	103		32
FERRACHROME W/O PPR	C-13	85	13	85.3	3.7	111	-0.1	68 -	103		
BECKMAN SYNCHRON CX4/5	C-14	100	13	99.2	3.8	111	+0.2	79 -	119	91A	1--1111
	C-15	72	13	71.7	3.2	111	+0.1	57 -	86		
	C-11			197.3	25.0	2928	+0.3				
ALL METHOD PRINCIPLES	C-12			82.4	12.2	2921	+0.3				
ALL INSTRUMENTS	C-13			84.3	13.0	2892	+0.1				
	C-14			96.5	10.5	2837	+0.3				
	C-15			70.0	9.3	2882	+0.2				
LITHIUM	C-11									91B	
MMOL/L	C-12										
TEST NOT PERFORMED	C-13										
NOT GIVEN	C-14									91A	
	C-15										
	C-11			.44	.08	1842					
ALL METHOD PRINCIPLES	C-12			1.47	.13	1849					
ALL INSTRUMENTS	C-13			2.41	.14	1842					
	C-14			2.55	.16	1846					
	C-15			.47	.07	1815					
LACTIC ACID	C-11	1.5	23	1.12	.18	1283	+2.1	.7 -	1.5	91B	1------I------1
MMOL/L	C-12	4.2	23	3.97	.37	1292	+0.6	3.2 -	4.8		
OXIDATION AUT	C-13	2.9	23	2.59	.22	1282	+1.4	2.1 -	3.1		
BECKMAN SYNCHRON CX4/5										91A	1-------1
	C-11										
NO COMPARATIVE METHOD	C-12										
	C-13										

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COMPREHENSIVE CHEMISTRY

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CAP NUMBER: 38988-01-01-01 KIT# 01

CONSTITUENT / UNIT OF MEASURE / YOUR REPORTED METHOD / COMPARATIVE METHOD	SPECIMEN	YOUR RESULT	EVAL CODE	MEAN	SD	NO. LABS	SDI	LIMITS OF ACCEPTABILITY LOWER	UPPER	QTR	PLOTS OF THE RELATIVE DISTANCE OF YOUR RESULTS FROM TARGETS AS PERCENTAGES OF ALLOWED DEVIATION (-100=LOWER LIMIT, 0=TARGET, +100=UPPER LIMIT)
MAGNESIUM	C-11	2.5	13	2.47	.07	225	+0.4	1.8 -	3.1	91B	41
MG/DL	C-12	1.4	13	1.37	.06	224	+0.5	1.0 -	1.8		
CALMAGITE	C-13	4.2	13	4.11	.12	225	+0.8	3.0 -	5.2		
BECKMAN SYNCHRON CX4/5	C-14	4.3	13	4.25	.13	225	+0.4	3.1 -	5.4	91A	21-2
	C-15	2.0	13	1.96	.08	227	+0.5	1.4 -	2.5		
	C-11			2.32	.19	3862	+0.9				
ALL METHOD PRINCIPLES	C-12			1.21	.20	3886	+1.0				
ALL INSTRUMENTS	C-13			4.02	.28	3852	+0.6				
	C-14			4.15	.30	3853	+0.5				
	C-15			1.86	.16	3830	+0.9				
ONCOTIC PRESSURE	C-11									91B	
MM HG	C-12										
TEST NOT PERFORMED	C-13									91A	
NO COMPARATIVE METHOD	C-11										
	C-12										
	C-13										
OSMOLALITY-SERUM	C-11									91B	
MOSM/KG H2O	C-12										
TEST NOT PERFORMED	C-13									91A	
NO COMPARATIVE METHOD	C-11										
	C-12										
	C-13										

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COMPREHENSIVE CHEMISTRY

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CONSTITUENT / UNIT OF MEASURE / YOUR REPORTED METHOD / COMPARATIVE METHOD	SPECIMEN	YOUR RESULT	EVAL CODE	MEAN	SD	NO. LABS	SDI	LIMITS OF ACCEPTABILITY LOWER	LIMITS OF ACCEPTABILITY UPPER	PLOTS OF THE RELATIVE DISTANCE OF YOUR RESULTS FROM TARGETS AS PERCENTAGES OF ALLOWED DEVIATION (-100=LOWER LIMIT, 0=TARGET, +100=UPPER LIMIT) QTR	-100 -75 -50 -25 0 25 50 75 100
PHOSPHORUS-SERUM	C-11	4.4	13	4.14	.20	236	+1.3	3.7 -	4.6	91B	2---1
MG/DL	C-12	8.1	13	7.79	.31	241	+1.0	6.9 -	8.7		
PHOSPHOMOLYBDATE UV	C-13	8.4	13	8.07	.32	239	+1.0	7.2 -	9.0		
BECKMAN SYNCHRON CX4/5										91A	11-1
ALL METHOD PRINCIPLES	C-11			3.95	.28	4637	+1.6				
ALL INSTRUMENTS	C-12			7.60	.29	4618	+1.7				
	C-13			7.83	.35	4632	+1.6				
POTASSIUM-SERUM	C-11			5.82	.08	212	+1.0			91B	2111
MMOL/L	C-12			3.16	.06	212	+0.7				
ION SELEC./DILUTED	C-13			5.92	.08	215	+1.0				
BECKMAN SYNCHRON CX4/5	C-14			6.29	.09	211	+1.2			91A	1-2-11
	C-15			3.54	.06	211	+1.0				
ALL POTASSIUM COMMON	C-11	5.9	14	5.82	.12	2686	+0.7	5.3 -	6.4		
ALL INSTRUMENTS	C-12	3.2	14	3.18	.09	2698	+0.2	2.6 -	3.7		
	C-13	6.0	14	5.93	.13	2671	+0.5	5.4 -	6.5		
	C-14	6.4	14	6.29	.14	2682	+0.8	5.7 -	6.8		
	C-15	3.6	14	3.56	.09	2688	+0.4	3.0 -	4.1		
PROTEIN, TOTAL-SERUM	C-11	7.2	13	7.08	.14	290	+0.9	6.3 -	7.8	91B	1-13
G/DL	C-12	5.2	13	5.11	.10	294	+0.9	4.6 -	5.7		
BIURET	C-13	6.2	13	6.12	.12	290	+0.7	5.5 -	6.8		
BECKMAN SYNCHRON CX4/5	C-14	6.6	13	6.48	.12	286	+1.0	5.8 -	7.2	91A	2--21
	C-15	4.8	13	4.80	.10	291	+0.0	4.3 -	5.3		
BIURET	C-11			6.97	.31	4927	+0.7				
ALL INSTRUMENTS	C-12			5.11	.24	4910	+0.4				
	C-13			6.07	.27	4911	+0.5				
	C-14			6.47	.29	4912	+0.4				
	C-15			4.77	.22	4883	+0.1				

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PREALBUMIN	C-11									91B
MG/DL	C-12									METHOD
NOT GIVEN	C-13									CHANGE
NOT GIVEN										91A
NO COMPARATIVE METHOD	C-11									
	C-12									
	C-13									
SODIUM-SERUM	C-11			148.1	1.6	214	-0.1			91B
MMOL/L	C-12			131.4	1.4	214	+0.4			
ION SELEC./DILUTED	C-13			153.6	1.6	213	+0.9			
BECKMAN SYNCHRON CX4/5	C-14			159.6	2.1	212	+1.1			91A
	C-15			127.4	1.3	213	+0.5			
ALL SODIUM DOMMON GP	C-11	148	14	148.5	1.8	2680	-0.3	144 -	153	
ALL INSTRUMENTS	C-12	132	14	131.6	1.7	2688	+0.2	127 -	136	
	C-13	155	14	154.2	2.0	2678	+0.4	150 -	159	
	C-14	162	14	160.1	2.0	2657	+1.0	156 -	165	
	C-15	128	14	127.8	1.7	2667	+0.1	123 -	132	
T-3 UPTAKE	C-11									91B
% UPTAKE	C-12									
TEST NOT PERFORMED	C-13									
	C-14									91A
	C-15									
NO COMPARATIVE METHOD	C-11									
	C-12									
	C-13									
	C-14									
	C-15									

EVALUATION AND COMPARATIVE-METHOD STATISTICS

PLOTS OF THE RELATIVE DISTANCE OF YOUR RESULTS FROM TARGETS AS PERCENTAGES OF ALLOWED DEVIATION

-100=LOWER LIMIT 0=TARGET +100=UPPER LIMIT

QTR -100 -75 -50 -25 0 25 50 75 100

91B 1--111----1

91A 13--------1.

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T UPTAKE / UPTAKE UNITS / TEST NOT PERFORMED	C-11									91B
	C-12									
	C-13									
	C-14									91A
	C-15									
NO COMPARATIVE METHOD	C-11									
	C-12									
	C-13									
	C-14									
	C-15									
THYROID STIM. HORMONE / UU/ML / TEST NOT PERFORMED	C-11									91B
	C-12									
	C-13									
NO COMPARATIVE METHOD	C-11									
	C-12									
	C-13									
THYROXINE / MCG/DL / TEST NOT PERFORMED	C-11									91B
	C-12									
	C-13									
	C-14									91A
	C-15									
NO COMPARATIVE METHOD	C-11									
	C-12									
	C-13									
	C-14									
	C-15									

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TRANSFERRIN	C-11									91B
MG/DL	C-12									
TEST NOT PERFORMED	C-13									91A
NO COMPARATIVE METHOD	C-11									
	C-12									
	C-13									
UREA - SERUM	C-11			24.8	.7	213	+1.7			91B 1-2----11
MG N/DL	C-12			59.6	1.5	213	+0.9			
UREASE WITH GLDH	C-13			50.6	1.3	213	+1.1			
BECKMAN SYNCHRON CX4/5	C-14			51.5	1.4	214	+1.1			91A 1-----2---2
	C-15			25.2	.8	214	+1.0			
	C-11	26	14	24.1	1.3	3490	+1.5	21 -	27	
UREASE WITH GLDH	C-12	61	14	59.5	3.1	3496	+0.5	54 -	65	
ALL AUTO CHEM INSTR	C-13	52	14	50.3	2.6	3492	+0.7	45 -	55	
	C-14	53	14	51.3	2.6	3492	+0.7	46 -	56	
	C-15	26	14	24.6	1.3	3466	+1.1	22 -	27	
URIC ACID	C-11			6.33	.12	290	-0.3			91B 1-12-1
MG/DL	C-12			8.80	.17	291	+0.6			
URICASE	C-13			8.68	.14	288	-0.6			
BECKMAN SYNCHRON CX4/5	C-14			8.77	.17	288	+0.2			91A 1--2--2
	C-15			6.16	.12	291	+0.3			
	C-11	6.3	14	6.14	.41	4888	+0.4	5.1 -	7.2	
URICASE	C-12	8.9	14	8.84	.45	4872	+0.1	7.3 -	10.4	
ALL INSTRUMENTS	C-13	8.6	14	8.58	.46	4884	+0.0	7.1 -	10.1	
	C-14	8.8	14	8.93	.46	4876	-0.3	7.4 -	10.5	
	C-15	6.2	14	6.12	.33	4853	+0.2	5.0 -	7.2	

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COMPREHENSIVE CHEMISTRY

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CONSTITUENT / UNIT OF MEASURE / YOUR REPORTED METHOD / COMPARATIVE METHOD	SPECIMEN	YOUR RESULT	EVAL CODE	MEAN	SD	NO. LABS	SDI	LIMITS OF ACCEPTABILITY LOWER	UPPER	PLOTS OF THE RELATIVE DISTANCE OF YOUR RESULTS FROM TARGETS AS PERCENTAGES OF ALLOWED DEVIATION (-100=LOWER LIMIT, 0=TARGET, +100=UPPER LIMIT) QTR	-100 -75 -50 -25 0 25 50 75 100
AMYLASE-SERUM	C-11	82	13	82.0	3.2	264	+0.0	72 -	92	91B	212
IU/L	C-12	401	13	397.1	10.7	259	+0.4	365 -	430		
BECKMAN SYNCHRON CX4/5	C-13	345	13	342.6	9.2	256	+0.3	315 -	371		
BECKMAN/37 C	C-14	338	13	336.9	9.5	257	+0.1	308 -	366	91A	1---11---11
	C-15	130	13	129.9	4.3	260	+0.0	117 -	143		
	C-11										
NO COMPARATIVE METHOD	C-12										
	C-13										
	C-14										
	C-15										
ALT SGPT	C-11	60	13	60.9	3.0	280	-0.3	48 -	74	91B	19---1
IU/L	C-12	143	13	137.2	4.4	280	+1.3	109 -	165		
BECKMAN SYNCHRON CX4/5	C-13	140	13	139.3	4.4	278	+0.2	111 -	168		
BECKMAN/37 C	C-14	148	13	147.3	5.0	278	+0.1	117 -	177	91A	2-21
	C-15	71	13	71.3	3.4	277	-0.1	57 -	86		
	C-11										
NO COMPARATIVE METHOD	C-12										
	C-13										
	C-14										
	C-15										
ALKALINE PHOSPHATASE	C-11	69	13	69.4	3.8	270	-0.1	58 -	81	91B	1-31
IU/L	C-12	195	13	198.1	9.7	270	-0.3	169 -	228		
BECKMAN SYNCHRON CX4/5	C-13	176	13	178.6	9.1	269	-0.3	151 -	206		
BECKMAN/37 C	C-14	170	13	172.9	8.9	269	-0.3	146 -	200	91A	1-2--1--1
	C-15	59	13	61.6	4.0	271	-0.7	49 -	74		
	C-11										
NO COMPARATIVE METHOD	C-12										
	C-13										
	C-14										
	C-15										

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COMPREHENSIVE CHEMISTRY

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CAP NUMBER: 38988-01-01-01 KIT# 01

CONSTITUENT / UNIT OF MEASURE / YOUR REPORTED METHOD / COMPARATIVE METHOD	SPECIMEN	YOUR RESULT	EVAL CODE	MEAN	SD	NO. LABS	SDI	LIMITS OF ACCEPTABILITY LOWER	UPPER	QTR	PLOTS OF THE RELATIVE DISTANCE OF YOUR RESULTS FROM TARGETS AS PERCENTAGES OF ALLOWED DEVIATION (-100=LOWER LIMIT, 0=TARGET, +100=UPPER LIMIT) -100 -75 -50 -25 0 25 50 75 100
AST SGOT	C-11	55	13	53.4	2.5	288	+0.6	42 -	65	91B	12--11
IU/L	C-12	166	13	160.1	4.5	256	+1.3	128 -	193		
BECKMAN SYNCHRON CX4/5	C-13	146	13	146.0	4.6	284	+0.0	116 -	176		
BECKMAN/37 C	C-14	145	13	144.6	5.3	286	+0.1	115 -	174	91A	221
	C-15	61	13	61.6	2.9	284	-0.2	49 -	74		
NO COMPARATIVE METHOD	C-11										
	C-12										
	C-13										
	C-14										
	C-15										
CREATINE KINASE	C-11	206	13	207.8	13.0	262	-0.1	168 -	247	91B	1-2-2
IU/L	C-12	698	13	695.6	29.8	262	+0.1	606 -	785		
BECKMAN SYNCHRON CX4/5	C-13	485	13	482.7	27.6	263	+0.1	399 -	566		
BECKMAN/37 C	C-14	499	13	503.5	29.7	260	-0.2	414 -	593	91A	1-11--2
	C-15	220	13	226.9	14.8	263	-0.5	182 -	272		
NO COMPARATIVE METHOD	C-11										
	C-12										
	C-13										
	C-14										
	C-15										
GAMMA GLUTAMYL TRANS	C-11	56	10	55.2	2.6	237	+0.3			91B	
IU/L	C-12	160	10	155.7	6.1	236	+0.7				
BECKMAN SYNCHRON CX4/5	C-13	192	10	188.0	7.5	234	+0.5				
BECKMAN/37 C										91A	
NO COMPARATIVE METHOD	C-11										
	C-12										
	C-13										

MT 11-11-91

COMPREHENSIVE CHEMISTRY

EVALUATION

CAP NUMBER: 38988-01-01-01 KIT# 01

CONSTITUENT / UNIT OF MEASURE / YOUR REPORTED METHOD / COMPARATIVE METHOD	SPECIMEN	YOUR RESULT	EVAL CODE	MEAN	SD	NO. LABS	SDI	LIMITS OF ACCEPTABILITY LOWER	UPPER	QTR	PLOTS OF THE RELATIVE DISTANCE OF YOUR RESULTS FROM TARGETS AS PERCENTAGES OF ALLOWED DEVIATION (-100=LOWER LIMIT, 0=TARGET, +100=UPPER LIMIT)
LACTATE DEHYDROGENASE	C-11	144	13	147.0	5.7	267	-0.5	117 -	177	91B	121--1
IU/L	C-12	373	13	377.5	12.6	269	-0.4	302 -	453		
BECKMAN SYNCHRON CX4/5	C-13	346	13	355.4	12.3	268	-0.8	284 -	427		
BECKMAN/37 C	C-14	340	13	346.3	12.3	266	-0.5	277 -	416	91A	2-21
	C-15	146	13	143.6	6.1	268	+0.4	114 -	173		
NO COMPARATIVE METHOD	C-11										
	C-12										
	C-13										
	C-14										
	C-15										
APOLIPOPROTEIN A1	C-16									91B	
MG/DL	C-17										
TEST NOT PERFORMED											
NOT GIVEN										91A	
NO COMPARATIVE METHOD	C-16										
	C-17										
APOLIPOPROTEIN B	C-16									91B	
MG/DL	C-17										
TEST NOT PERFORMED											
NOT GIVEN										91A	
NO COMPARATIVE METHOD	C-16										
	C-17										

AT 11-11-91

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COMPREHENSIVE CHEMISTRY

E V A L U A T I O N

CAP NUMBER: 38988-01-01-01 KIT# 01

CONSTITUENT / UNIT OF MEASURE / YOUR REPORTED METHOD / COMPARATIVE METHOD	SPECIMEN	YOUR RESULT	EVAL CODE	MEAN	SD	NO. LABS	SDI	LIMITS OF ACCEPTABILITY LOWER	UPPER	PLOTS QTR
LDL CHOLESTEROL	C-16	28	10	138.3	19.9	2381	-5.5			91B
MG/DL	C-17	225	10	221.3	22.6	2375	+0.2			
TRIGLYCERIDE /5										91A
NO COMPARATIVE METHOD	C-16									
	C-17									
CHOLESTEROL L	C-16			189.0	4.8	277	-1.0			91B
MG/DL	C-17			294.1	7.3	278	-0.3			
ENZYMATIC	C-18			176.6	4.7	280	-0.6			
BECKMAN SYNCHRON CX4/5	C-19			259.2	6.7	276	-0.8			91A
	C-20			211.2	5.9	276	-1.1			
	C-16	184	14	196.0	11.4	4584	-1.1	176 -	216	
ENZYMATIO	C-17	292	14	299.8	15.9	4586	-0.5	269 -	330	
ALL MULTICON ANALYZERS	C-18	174	14	182.3	10.4	4578	-0.8	164 -	201	
	C-19	254	14	266.7	15.6	4559	-0.8	240 -	294	
	C-20	205	14	217.2	12.3	4544	-1.0	195 -	239	
HDL CHOLESTEROL (L)	C-16	134	10	50.6	23.4	89	+3.6			91B
MG/DL	C-17	27	10	26.9	6.0	91	+0.0			
PHOS/MG WITH ENZ QUANT	C-18	120	10	48.5	24.5	88	+2.9			
BECKMAN SYNCHRON CX4/5	C-19	21	10	20.2	3.7	90	+0.2			91A
	C-20	88	10	44.2	16.2	88	+2.7			
NO COMPARATIVE METHOD	C-16									
	C-17									
	C-18									
	C-19									
	C-20									

PLOTS OF THE RELATIVE DISTANCE OF YOUR RESULTS FROM TARGETS AS PERCENTAGES OF ALLOWED DEVIATION
-100=LOWER LIMIT 0=TARGET +100=UPPER LIMI

QTR -100 -75 -50 -25 0 25 50 75 100

91B: 1 1 1 1 - - - 1

91A: 1 - - - 1 - 1 1 1

RT 11-11-91

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COMPREHENSIVE CHEMISTRY

E V A L U A T I O N

CAP NUMBER: 38988-01-01-01 KIT# 01

CONSTITUENT / UNIT OF MEASURE / YOUR REPORTED METHOD / COMPARATIVE METHOD	SPECIMEN	YOUR RESULT	EVAL CODE	MEAN	SD	NO. LABS	SDI	LIMITS OF ACCEPTABILITY LOWER	UPPER	PLOTS OF THE RELATIVE DISTANCE OF YOUR RESULTS FROM TARGETS AS PERCENTAGES OF ALLOWED DEVIATION -100=LOWER LIMIT 0=TARGET +100=UPPER LIMIT QTR
TRIGLYCERIDE (L)	C-16	109	13	111.0	6.6	196	-0.3	91 -	131	91B
MG/DL	C-17	198	13	204.7	8.7	196	-0.8	178 -	231	
ENZ-COLOR W/OGB W/OSB	C-18	125	13	128.2	5.7	194	-0.6	111 -	146	
BECKMAN SYNCHRON CX4/5	C-19	179	13	183.4	7.1	191	-0.6	162 -	205	91A
	C-20	150	13	155.7	7.4	194	-0.8	133 -	178	
NO COMPARATIVE METHOD	C-16									
	C-17									
	C-18									
	C-19									
	C-20									
BILIRUBIN, DIRECT	C-11									91B
MG/DL	C-12									
TEST NOT PERFORMED	C-93									
NOT GIVEN										91A
NO COMPARATIVE METHOD	C-11									
	C-12									
	C-93									
BILIRUBIN, TOTAL	C-93	2.0	10	1.98	.09	217	+0.2			91B
MG/DL										METHOD
DIAZO J-G W/O BLANK										CHANGE
BECKMAN SYNCHRON CX4/5										91A
ALL METHOD PRINCIPLES	C-93			1.83	.26	4609	+0.7			
ALL INSTRUMENTS										

11-11-91

THE COLLEGE OF AMERICAN PATHOLOGISTS RECOMMENDS THAT THE RESULTS OF THIS INTERLABORATORY COMPARISON NOT BE USED AS A SOLE CRITERION FOR JUDGING THE PERFORMANCE OF ANY INDIVIDUAL CLINICAL LABORATORY

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COMPREHENSIVE CHEMISTRY

E V A L U A T I O N

CAP NUMBER: 38988-01-01-01 KIT# 01

CONSTITUENT / UNIT OF MEASURE / YOUR REPORTED METHOD / COMPARATIVE METHOD	EVALUATION AND COMPARATIVE-METHOD STATISTICS: SPECIMEN	YOUR RESULT	EVAL CODE	MEAN	SD	NO. LABS	SDI	LIMITS OF ACCEPTABILITY LOWER	LIMITS OF ACCEPTABILITY UPPER	PLOTS OF THE RELATIVE DISTANCE OF YOUR RESULTS FROM TARGETS AS PERCENTAGES OF ALLOWED DEVIATION (-100=LOWER LIMIT, 0=TARGET, +100=UPPER LIMIT)
AMMONIA UMOL/L TEST NOT PERFORMED NOT GIVEN	C-97									QTR 91B METHOD CHANGE 91A
NO COMPARATIVE METHOD	C-97									

PENNINGTON BIOMEDICAL RSCH CTR
CLINICAL RESEARCH LABORATORY
6400 PERKINS RD.
BATON ROUGE LA 70808

YOUR NEXT COMPREHENSIVE CHEMISTRY SURVEY KIT, SET C-C, WAS SHIPPED ON SEPTEMBER 23, 1991.

CHECKED BY ..... DATE REVIEWED .....

MT
11-1-91

SURVEY SET: C - C
CAP NUMBER: 38988-01-01-01 KIT# 01
ATTENTION:
INSTITUTION: PENNINGTON BIOMEDICAL RSCH CTR

COMPREHENSIVE CHEMISTRY

E V A L U A T I O N

KIT MAILED: 9/23/91
QUEST. EVAL: 11/23/91

CONSTITUENT / UNIT OF MEASURE / YOUR REPORTED METHOD / COMPARATIVE METHOD	SPECIMEN	YOUR RESULT	EVAL CODE	MEAN	SD	NO. LABS	SDI	LIMITS OF ACCEPTABILITY LOWER	UPPER	QTR	PLOTS OF THE RELATIVE DISTANCE OF YOUR RESULTS FROM TARGETS AS PERCENTAGES OF ALLOWED DEVIATION (-100=LOWER LIMIT, 0=TARGET, +100=UPPER LIMIT) -100 -75 -50 -25 0 25 50 75 100
ALBUMIN G/DL	C-21	2.7	13	2.71	.08	325	-0.1	2.4	3.0	91C	
DYE BINDING-BCP	C-22	3.6	13	3.61	.10	330	-0.1	3.2	4.0		
BECKMAN SYNCHRON CX4/5	C-23	2.9	13	2.85	.09	331	+0.6	2.5	3.2		
	C-24	4.0	13	3.96	.12	326	+0.3	3.5	4.4	91B	
	C-25	2.4	13	2.45	.08	327	-0.6	2.2	2.7		
	C-21			2.82	.17	603	-0.7			91A	
DYE BINDING-BCG W/RA	C-22			3.69	.18	601	-0.5				
ALL INSTRUMENTS	C-23			2.96	.17	600	-0.4				
	C-24			4.03	.18	597	-0.2				
	C-25			2.57	.16	600	-1.1				
BILIRUBIN, TOTAL MG/DL	C-21	1.2	13	1.15	.07	283	+0.7	.8	1.5	91C	
DIAZO J-G W/O BLANK	C-22	5.0	13	5.01	.15	283	-0.1	4.0	6.1		
BECKMAN SYNCHRON CX4/5	C-23	1.2	13	1.22	.07	284	-0.3	.9	1.6		
	C-24	5.3	13	5.47	.16	281	-1.1	4.3	6.6	91B	
	C-25	1.0	13	1.08	.07	285	-1.1	.7	1.4		
	C-21			.95	.12	5550	+2.1			91A	
ALL METHOD PRINCIPLES	C-22			4.81	.35	5579	+0.5				
ALL INSTRUMENTS	C-23			1.05	.12	5527	+1.3				
	C-24			5.25	.40	5561	+0.1				
	C-25			.91	.13	5537	+0.7				
CALCIUM-SERUM MG/DL	C-21			9.44	.24	301	+0.7			91C	
ARSENAZO III DYE	C-22			12.13	.31	302	-0.7				
BECKMAN SYNCHRON CX4/5	C-23			10.15	.29	304	-0.2				
	C-24			13.23	.36	301	-0.6			91B	
	C-25			8.86	.25	298	-0.6				
	C-21	9.6	14	9.20	.28	5595	+1.4	8.2	10.2	91A	
ALL METHOD PRINCIPLES	C-22	11.9	14	12.03	.37	5605	-0.4	11.0	13.1		
ALL INSTRUMENTS	C-23	10.1	14	10.03	.30	5594	+0.2	9.0	11.1		
	C-24	13.0	14	13.21	.47	5621	-0.4	12.2	14.3		
	C-25	8.7	14	8.69	.29	5610	+0.0	7.6	9.7		

PT 1-2-92

CAP NUMBER: 38988-01-01-01 KIT# 01

COMPREHENSIVE CHEMISTRY

E V A L U A T I O N

CONSTITUENT / UNIT OF MEASURE / YOUR REPORTED METHOD / COMPARATIVE METHOD	SPECIMEN	YOUR RESULT	EVAL CODE	MEAN	SD	NO. LABS	SDI	LIMITS OF ACCEPTABILITY LOWER	UPPER	QTR	PLOTS OF THE RELATIVE DISTANCE OF YOUR RESULTS FROM TARGETS AS PERCENTAGES OF ALLOWED DEVIATION (-100=LOWER LIMIT, 0=TARGET, +100=UPPER LIMIT) -100 -75 -50 -25 0 25 50 75 100
IONIZED CALCIUM	C-21									91C	
MMOL/L	C-22										
TEST NOT PERFORMED											
NOT GIVEN										91B	
	C-21									91A	
	C-22										
NO COMPARATIVE METHOD											
CHLORIDE	C-21			92.2	1.6	266	+0.5			91C	2---111
MMOL/L	C-22			115.5	1.9	264	-0.3				
ION SELEC./DILUTED	C-23			100.7	1.6	262	+0.2				
BECKMAN SYNCHRON CX4/5	C-24			127.7	2.5	262	-0.7			91B	1-11---1--1
	C-25			87.0	1.3	260	+0.0				
	C-21	93	14	93.8	2.1	1052	-0.4	89 -	99	91A	1------2--11
ALL CHLORIDE COMMON GP	C-22	115	14	114.5	2.9	1054	+0.2	108 -	121		
ALL AUTO CHEM INSTR	C-23	101	14	100.7	2.2	1050	+0.1	95 -	106		
	C-24	126	14	125.0	3.6	1051	+0.3	118 -	132		
	C-25	87	14	87.6	2.3	1049	-0.3	83 -	92		
CO2	C-21	17	10	16.9	.9	262	+0.1			91C	
MMOL/L	C-22	28	10	28.0	.9	264	+0.0				
ION SELEC./DILUTED											
BECKMAN SYNCHRON CX4/5										91B	
	C-21									91A	
	C-22										
NO COMPARATIVE METHOD											

CAP NUMBER: 38988-01-01-01 KIT# 01

COMPREHENSIVE CHEMISTRY

E V A L U A T I O N

CONSTITUENT / UNIT OF MEASURE / YOUR REPORTED METHOD / COMPARATIVE METHOD	SPECIMEN	YOUR RESULT	EVAL CODE	MEAN	SD	NO. LABS	SDI	LIMITS OF ACCEPTABILITY LOWER	UPPER	QTR	PLOTS OF THE RELATIVE DISTANCE OF YOUR RESULTS FROM TARGETS AS PERCENTAGES OF ALLOWED DEVIATION (-100=LOWER LIMIT, 0=TARGET, +100=UPPER LIMIT) -100 -75 -50 -25 0 25 50 75 100
CREATININE-SERUM	C-21			1.08	.06	214	+2.0			91C	
MG/DL	C-22			4.70	.15	211	+0.7				
KINETIC ALK. PICRATE	C-23			1.22	.06	213	-0.3				
BECKMAN SYNCHRON CX4/5	C-24			5.13	.17	211	+0.4			91B	
	C-25			1.06	.06	210	+0.7				
	C-21	1.2	14	1.06	.11	6088	+1.3	.7 -	1.4	91A	
ALL METHOD PRINCIPLES	C-22	4.8	14	4.76	.22	6063	+0.2	4.0 -	5.5		
ALL INSTRUMENTS	C-23	1.2	14	1.20	.12	6066	+0.0	.9 -	1.5		
	C-24	5.2	14	5.23	.27	6061	-0.1	4.4 -	6.1		
	C-25	1.1	14	1.03	.11	6058	+0.6	.7 -	1.4		
GLUCOSE-SERUM	C-21			98.2	2.9	239	-0.1			91C	
MG/DL	C-22			275.5	7.0	237	-0.4				
HEXOKINASE, UV	C-23			108.1	3.1	238	-0.4				
BECKMAN SYNCHRON CX4/5	C-24			300.9	7.9	236	-0.6			91B	
	C-25			93.5	2.6	236	-1.0				
	C-21	98	14	94.5	2.4	877	+1.5	85 -	104	91A	
GLU OXIDASE O2 ELEC	C-22	273	14	268.3	5.5	870	+0.9	241 -	296		
ALL AUTO CHEM INSTR	C-23	107	14	104.5	2.5	871	+1.0	94 -	115		
	C-24	296	14	292.7	6.3	875	+0.5	263 -	322		
	C-25	91	14	90.8	2.3	875	+0.1	81 -	100		

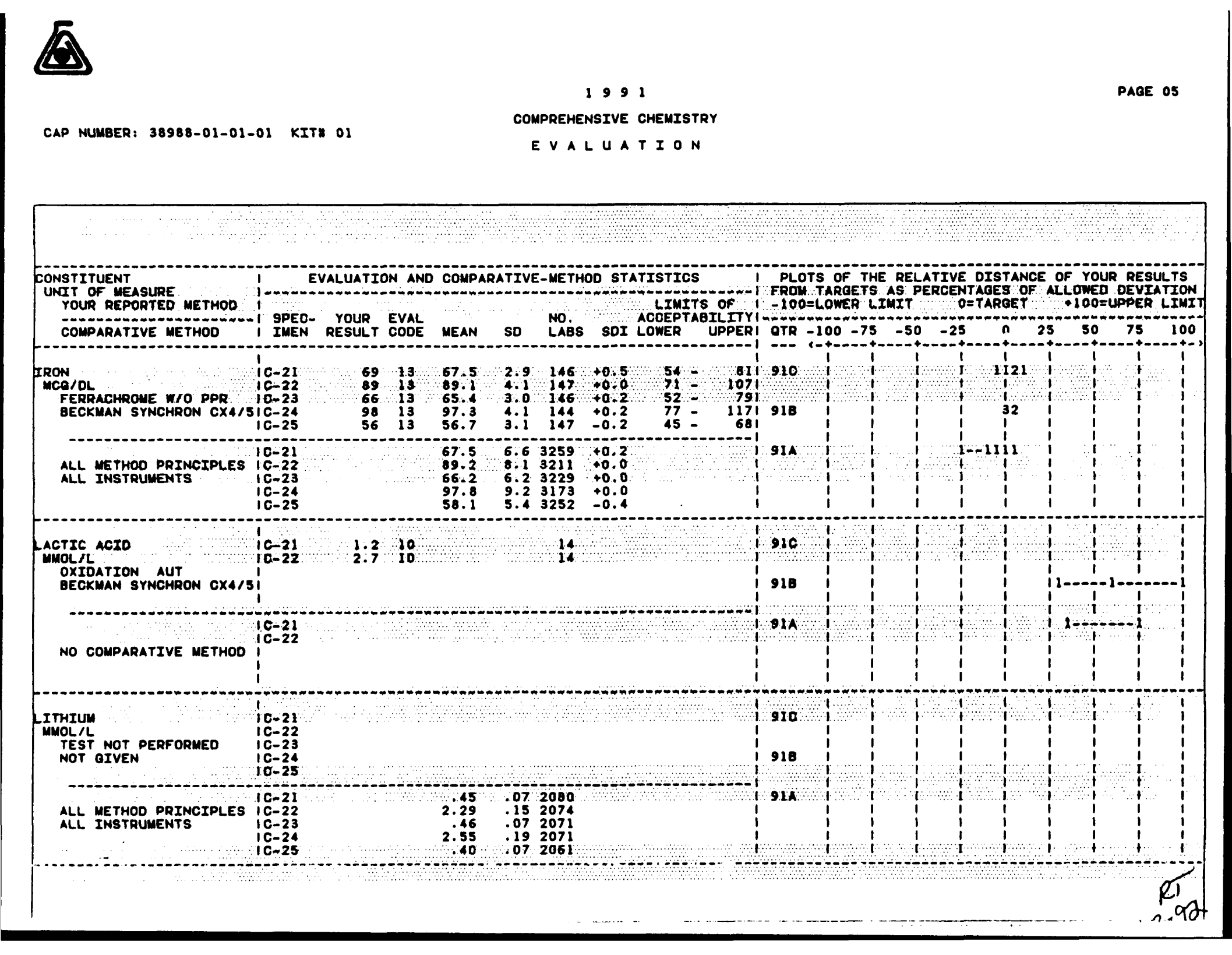
#RESULT EXCEEDS FIXED CRITERIA

COMPREHENSIVE CHEMISTRY

CAP NUMBER: 38988-01-01-01 KIT# 01

E V A L U A T I O N

CONSTITUENT / UNIT OF MEASURE / YOUR REPORTED METHOD / COMPARATIVE METHOD	SPECIMEN	YOUR RESULT	EVAL CODE	MEAN	SD	NO. LABS	SDI	LIMITS OF ACCEPTABILITY LOWER	UPPER	PLOTS OF THE RELATIVE DISTANCE OF YOUR RESULTS FROM TARGETS AS PERCENTAGES OF ALLOWED DEVIATION (-100=LOWER LIMIT, 0=TARGET, +100=UPPER LIMIT) QTR
IRON	C-21	69	13	67.5	2.9	146	+0.5	54 -	81	91C
MCG/DL	C-22	89	13	89.1	4.1	147	+0.0	71 -	107	
FERRACHROME W/O PPR	C-23	66	13	65.4	3.0	146	+0.2	52 -	79	
BECKMAN SYNCHRON CX4/5	C-24	98	13	97.3	4.1	144	+0.2	77 -	117	91B
	C-25	56	13	56.7	3.1	147	-0.2	45 -	68	
	C-21			67.5	6.6	3259	+0.2			91A
ALL METHOD PRINCIPLES	C-22			89.2	8.1	3211	+0.0			
ALL INSTRUMENTS	C-23			66.2	6.2	3229	+0.0			
	C-24			97.8	9.2	3173	+0.0			
	C-25			58.1	5.4	3252	-0.4			
LACTIC ACID	C-21	1.2	10			14				91C
MMOL/L	C-22	2.7	10			14				
OXIDATION AUT										
BECKMAN SYNCHRON CX4/5										91B
	C-21									91A
	C-22									
NO COMPARATIVE METHOD										
LITHIUM	C-21									91C
MMOL/L	C-22									
TEST NOT PERFORMED	C-23									
NOT GIVEN	C-24									91B
	C-25									
	C-21			.45	.07	2080				91A
ALL METHOD PRINCIPLES	C-22			2.29	.15	2074				
ALL INSTRUMENTS	C-23			.46	.07	2071				
	C-24			2.55	.19	2071				
	C-25			.40	.07	2061				



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COMPREHENSIVE CHEMISTRY

E V A L U A T I O N

CAP NUMBER: 38988-01-01-01 KIT# 01

CONSTITUENT / UNIT OF MEASURE / YOUR REPORTED METHOD / COMPARATIVE METHOD	SPECIMEN	YOUR RESULT	EVAL CODE	MEAN	SD	NO. LABS	SDI	LIMITS OF ACCEPTABILITY LOWER	UPPER	QTR	PLOTS OF THE RELATIVE DISTANCE OF YOUR RESULTS FROM TARGETS AS PERCENTAGES OF ALLOWED DEVIATION (-100=LOWER LIMIT, 0=TARGET, +100=UPPER LIMIT) -100 -75 -50 -25 0 25 50 75 100
MAGNESIUM / MG/DL / CALMAGITE / BECKMAN SYNCHRON CX4/5	C-21	2.0	13	1.92	.08	282	+1.0	1.4 -	2.4	91C	112-1
	C-22	4.0	13	3.97	.15	281	+0.2	2.9 -	5.0		
	C-23	2.3	13	2.30	.09	281	+0.0	1.7 -	2.9		
	C-24	4.3	13	4.35	.17	283	-0.3	3.2 -	5.5	91B	41
	C-25	2.0	13	1.98	.09	282	+0.2	1.4 -	2.5		
ALL METHOD PRINCIPLES / ALL INSTRUMENTS	C-21			1.78	.15	4313	+1.5			91A	21-2
	C-22			3.79	.27	4298	+0.8				
	C-23			2.16	.18	4343	+0.8				
	C-24			4.16	.29	4293	+0.5				
	C-25			1.86	.16	4286	+0.9				
ONCOTIC PRESSURE / MM HG / TEST NOT PERFORMED	C-21									91C	
	C-22										
										91B	
NO COMPARATIVE METHOD	C-21									91A	
	C-22										
OSMOLALITY-SERUM / MOSM/KG H2O / TEST NOT PERFORMED	C-21									91C	
	C-22										
										91B	
NO COMPARATIVE METHOD	C-21									91A	
	C-22										

1-2-98

CAP NUMBER: 38988-01-01-01 KIT# 01

COMPREHENSIVE CHEMISTRY

E V A L U A T I O N

CONSTITUENT / UNIT OF MEASURE / YOUR REPORTED METHOD / COMPARATIVE METHOD	SPECIMEN	YOUR RESULT	EVAL CODE	MEAN	SD	NO. LABS	SDI	LIMITS OF ACCEPTABILITY LOWER	UPPER	QTR	PLOTS OF THE RELATIVE DISTANCE OF YOUR RESULTS FROM TARGETS AS PERCENTAGES OF ALLOWED DEVIATION -100=LOWER LIMIT 0=TARGET +100=UPPER LIMIT -100 -75 -50 -25 0 25 50 75 100
PHOSPHORUS-SERUM	C-21	5.0	13	4.52	.26	280	+1.8	4.0 -	5.0	91C	1-----1
MG/DL	C-22	7.6	13	7.46	.37	281	+0.4	6.6 -	8.3		
PHOSPHOMOLYBDATE UV	C-23	5.4	13	5.13	.28	281	+1.0	4.5 -	5.7		
BECKMAN SYNCHRON CX4/5										91B	2---1
	C-21			4.37	.23	5142	+2.7			91A	11-1
ALL METHOD PRINCIPLES	C-22			7.09	.31	5085	+1.6				
ALL INSTRUMENTS	C-23			4.99	.24	5080	+1.7				
POTASSIUM-SERUM	C-21			3.36	.07	265	+0.6			91C	1-211
MMOL/L	C-22			5.69	.08	264	+0.1				
ION SELEC./DILUTED	C-23			3.63	.07	263	+1.0				
BECKMAN SYNCHRON CX4/5	C-24			6.26	.09	265	+0.4			91B	2111
	C-25			3.13	.07	263	-0.4				
	C-21	3.4	14	3.39	.09	2926	+0.1	2.8 -	3.9	91A	1-2-11
ALL POTASSIUM COMMON	C-22	5.7	14	5.70	.13	2947	+0.0	5.2 -	6.2		
ALL INSTRUMENTS	C-23	3.7	14	3.65	.09	2924	+0.6	3.1 -	4.2		
	C-24	6.3	14	6.27	.15	2938	+0.2	5.7 -	6.8		
	C-25	3.1	14	3.16	.09	2909	-0.7	2.6 -	3.7		
PROTEIN, TOTAL-SERUM	C-21	4.6	13	4.60	.08	342	+0.0	4.1 -	5.1	91C	1---2-1-1
G/DL	C-22	6.0	13	5.93	.12	348	+0.6	5.3 -	6.6		
BIURET	C-23	4.8	13	4.86	.09	346	-0.7	4.3 -	5.4		
BECKMAN SYNCHRON CX4/5	C-24	6.4	13	6.48	.12	342	-0.7	5.8 -	7.2	91B	1-13
	C-25	4.1	13	4.22	.09	336	-1.3	3.8 -	4.7		
	C-21			4.53	.20	5368	+0.4			91A	2--21
BIURET	C-22			5.88	.24	5379	+0.5				
ALL INSTRUMENTS	C-23			4.82	.22	5338	-0.1				
	C-24			6.44	.28	5349	-0.1				
	C-25			4.18	.19	5251	-0.4				

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CAP NUMBER: 38988-01-01-01 KIT# 01

COMPREHENSIVE CHEMISTRY

E V A L U A T I O N

CONSTITUENT / UNIT OF MEASURE / YOUR REPORTED METHOD / COMPARATIVE METHOD	SPECIMEN	YOUR RESULT	EVAL CODE	MEAN	SD	NO. LABS	SDI	LIMITS OF ACCEPTABILITY LOWER	UPPER	QTR	PLOTS OF THE RELATIVE DISTANCE OF YOUR RESULTS FROM TARGETS AS PERCENTAGES OF ALLOWED DEVIATION (-100=LOWER LIMIT, 0=TARGET, +100=UPPER LIMIT) -100 -75 -50 -25 0 25 50 75 100
PREALBUMIN	C-21									91C	
MG/DL	C-22										
TEST NOT PERFORMED										91B	
NO COMPARATIVE METHOD	C-21									91A	
	C-22										
SODIUM-SERUM	C-21			122.3	1.3	264	+1.3			91C	1--2----1-1
MMOL/L	C-22			148.5	1.8	264	+0.3				
ION SELEC./DILUTED	C-23			129.4	1.3	260	+1.2				
BECKMAN SYNCHRON CX4/5	C-24			159.3	1.9	260	-0.2			91B	1--111----1
	C-25			114.7	1.3	260	+0.2				
ALL SODIUM COMMON GP	C-21	124	14	122.4	1.8	2920	+0.9	118 -	127	91A	13--------1
ALL INSTRUMENTS	C-22	149	14	148.9	1.7	2890	+0.1	144 -	153		
	C-23	131	14	129.9	1.7	2900	+0.6	125 -	134		
	C-24	159	14	159.7	2.1	2877	-0.3	155 -	164		
	C-25	115	14	115.0	1.8	2891	+0.0	111 -	119		
T-3 UPTAKE	C-21									91C	
% UPTAKE	C-22										
TEST NOT PERFORMED	C-23										
	C-24									91B	
	C-25										
NO COMPARATIVE METHOD	C-21									91A	
	C-22										
	C-23										
	C-24										
	C-25										

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CAP NUMBER: 38988-01-01-01 KIT# 01

COMPREHENSIVE CHEMISTRY

E V A L U A T I O N

CONSTITUENT / UNIT OF MEASURE / YOUR REPORTED METHOD / COMPARATIVE METHOD	SPECIMEN	YOUR RESULT	EVAL CODE	MEAN	SD	NO. LABS	SDI	LIMITS OF ACCEPTABILITY LOWER	LIMITS OF ACCEPTABILITY UPPER	PLOTS OF THE RELATIVE DISTANCE OF YOUR RESULTS FROM TARGETS AS PERCENTAGES OF ALLOWED DEVIATION -100=LOWER LIMIT 0=TARGET +100=UPPER LIMIT: QTR	-100	-75	-50	-25	0	25	50	75	100
T UPTAKE / UPTAKE UNITS / TEST NOT PERFORMED	C-21									91C										
	C-22																			
	C-23																			
	C-24									91B										
	C-25																			
NO COMPARATIVE METHOD	C-21									91A										
	C-22																			
	C-23																			
	C-24																			
	C-25																			
THYROXINE / MCG/DL / TEST NOT PERFORMED	C-21									91C										
	C-22																			
	C-23																			
	C-24									91B										
	C-25																			
NO COMPARATIVE METHOD	C-21									91A										
	C-22																			
	C-23																			
	C-24																			
	C-25																			
TRANSFERRIN / MG/DL / TEST NOT PERFORMED	C-21									91C										
	C-22																			
										91B										
NO COMPARATIVE METHOD	C-21									91A										
	C-22																			

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CAP NUMBER: 38988-01-01-01 KIT# 01

COMPREHENSIVE CHEMISTRY

E V A L U A T I O N

CONSTITUENT / UNIT OF MEASURE / YOUR REPORTED METHOD / COMPARATIVE METHOD	SPECIMEN	YOUR RESULT	EVAL CODE	MEAN	SD	NO. LABS	SDI	LIMITS OF ACCEPTABILITY LOWER	UPPER	PLOTS OF THE RELATIVE DISTANCE OF YOUR RESULTS FROM TARGETS AS PERCENTAGES OF ALLOWED DEVIATION (-100=LOWER LIMIT, 0=TARGET, +100=UPPER LIMIT) QTR	-100	-75	-50	-25	0	25	50	75	100
UREA - SERUM	C-21			24.3	.7	259	+1.0			91C					1	1	1	1	1
MG N/DL	C-22			47.0	1.4	259	+0.0												
UREASE WITH GLDH	C-23			23.7	.7	256	+0.4												
BECKMAN SYNCHRON CX4/5	C-24			51.5	1.4	256	-0.4			91B						1	2		1 1
	C-25			20.6	.7	255	+0.6												
	C-21	25	14	23.4	1.2	3842	+1.3	21 -	26	91A					1			2	2
UREASE WITH GLDH	C-22	47	14	46.6	2.2	3832	+0.2	42 -	51										
ALL AUTO CHEM INSTR	C-23	24	14	23.0	1.2	3810	+0.8	20 -	26										
	C-24	51	14	51.1	2.5	3835	+0.0	46 -	56										
	C-25	21	14	19.9	1.1	3822	+1.0	17 -	22										
URIC ACID	C-21			5.81	.15	352	-0.1			91C					1	2	1		
MG/DL	C-22			7.90	.18	347	+0.0												
URICASE	C-23			6.11	.14	347	-0.1												
BECKMAN SYNCHRON CX4/5	C-24			8.59	.20	344	-0.5			91B					1	1	2	1	
	C-25			5.33	.14	349	-0.9												
	C-21	5.8	14	5.81	.31	5421	+0.0	4.8 -	6.8	91A					1		2		2
URIDASE	C-22	7.9	14	8.12	.41	5386	-0.5	6.7 -	9.5										
ALL INSTRUMENTS	C-23	6.1	14	6.19	.32	5355	-0.3	5.1 -	7.3										
	C-24	8.5	14	8.88	.48	5397	-0.8	7.3 -	10.4										
	C-25	5.2	14	5.36	.29	5348	-0.6	4.4 -	6.3										
AMYLASE-SERUM	C-21	122	13	122.5	4.9	323	-0.1	107 -	138	91C					1	1	2	1	
IU/L	C-22	305	13	305.4	8.9	319	+0.0	278 -	333										
BECKMAN SYNCHRON CX4/5	C-23	137	13	137.5	4.8	321	-0.1	123 -	152										
BECKMAN/37 C	C-24	328	13	332.9	10.7	320	-0.5	300 -	365	91B						2	1	2	
	C-25	117	13	118.6	4.3	319	-0.4	105 -	132										
	C-21									91A				1		1	1		1 1
	C-22																		
NO COMPARATIVE METHOD	C-23																		
	C-24																		
	C-25																		

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COMPREHENSIVE CHEMISTRY

E V A L U A T I O N

CONSTITUENT / UNIT OF MEASURE / YOUR REPORTED METHOD / COMPARATIVE METHOD	SPECIMEN	YOUR RESULT	EVAL CODE	MEAN	SD	NO. LABS	SDI	LIMITS OF ACCEPTABILITY LOWER	UPPER	QTR	PLOTS OF THE RELATIVE DISTANCE OF YOUR RESULTS FROM TARGETS AS PERCENTAGES OF ALLOWED DEVIATION (-100=LOWER LIMIT, 0=TARGET, +100=UPPER LIMIT) -100 -75 -50 -25 0 25 50 75 100
ALT SGPT	C-21	67	13	66.4	3.4	333	+0.2	53 -	80	91C	1121
IU/L	C-22	138	13	132.9	4.4	332	+0.0	106 -	160		
BECKMAN SYNCHRON CX4/5	C-23	69	13	69.9	3.5	330	-0.3	55 -	84		
BECKMAN/37 C	C-24	146	13	146.2	4.9	332	+0.0	117 -	176	91B	13---1
	C-25	60	13	61.1	3.4	330	-0.3	48 -	74		
	C-21									91A	2-21
	C-22										
NO COMPARATIVE METHOD	C-23										
	C-24										
	C-25										
ALKALINE PHOSPHATASE	C-21	55	13	57.1	3.2	329	-0.7	47 -	67	91C	2-12
IU/L	C-22	157	13	160.1	8.0	329	-0.4	136 -	185		
BECKMAN SYNCHRON CX4/5	C-23	76	13	77.8	4.3	330	-0.4	64 -	91		
BECKMAN/37 C	C-24	164	13	171.3	8.3	325	-0.9	146 -	197	91B	1-81
	C-25	64	13	67.8	3.8	327	-1.0	56 -	80		
	C-21									91A	1-2--1--1
	C-22										
NO COMPARATIVE METHOD	C-23										
	C-24										
	C-25										
AST SGOT	C-21	59	13	58.3	2.9	348	+0.2	46 -	70	91C	1112
IU/L	C-22	132	13	131.0	4.7	344	+0.2	104 -	158		
BECKMAN SYNCHRON CX4/5	C-23	55	13	55.3	2.8	344	-0.1	44 -	67		
BECKMAN/37 C	C-24	144	13	148.5	5.0	343	+0.1	114 -	173	91B	12--11
	C-25	46	13	49.2	2.6	340	-0.5	39 -	59		
	C-21									91A	221
	C-22										
NO COMPARATIVE METHOD	C-23										
	C-24										
	C-25										

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COMPREHENSIVE CHEMISTRY

E V A L U A T I O N

CONSTITUENT / UNIT OF MEASURE / YOUR REPORTED METHOD / COMPARATIVE METHOD	SPECIMEN	YOUR RESULT	EVAL CODE	MEAN	SD	NO. LABS	SDI	LIMITS OF ACCEPTABILITY LOWER	UPPER	QTR	PLOTS OF THE RELATIVE DISTANCE OF YOUR RESULTS FROM TARGETS AS PERCENTAGES OF ALLOWED DEVIATION (-100=LOWER LIMIT, 0=TARGET, +100=UPPER LIMIT)
CREATINE KINASE	C-21	210	13	220.6	14.7	322	-0.7	176 -	265	91C	
IU/L	C-22	459	13	483.9	28.0	324	-0.9	399 -	568		
BECKMAN SYNCHRON CX4/5	C-23	228	13	241.8	15.4	321	-0.9	195 -	288		
BECKMAN/37 C	C-24	476	13	514.8	31.3	319	-1.2	420 -	609	91B	
	C-25	194	13	207.7	14.1	317	-1.0	165 -	250		
	C-21									91A	
	C-22										
NO COMPARATIVE METHOD	C-23										
	C-24										
	C-25										
GAMMA GLUTAMYL TRANS	C-21	53	10	53.2	2.5	283	-0.1			91C	
IU/L	C-22	158	10	159.1	6.5	282	-0.2				
BECKMAN SYNCHRON CX4/5											
BECKMAN/37 C										91B	
	C-21									91A	
	C-22										
NO COMPARATIVE METHOD											
LACTATE DEHYDROGENASE	C-21	136	13	140.0	5.9	331	-0.3	112 -	168	91C	
IU/L	C-22	308	13	317.9	12.0	330	-0.8	254 -	382		
BECKMAN SYNCHRON CX4/5	C-23	149	13	155.2	6.6	330	-0.9	124 -	187		
BECKMAN/37 C	C-24	334	13	346.5	12.7	329	-1.0	277 -	416	91B	
	C-25	129	13	134.0	5.7	327	-0.9	107 -	161		
	C-21									91A	
	C-22										
NO COMPARATIVE METHOD	C-23										
	C-24										
	C-25										

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COMPREHENSIVE CHEMISTRY

E V A L U A T I O N

CONSTITUENT / UNIT OF MEASURE / YOUR REPORTED METHOD / COMPARATIVE METHOD	SPECIMEN	YOUR RESULT	EVAL CODE	MEAN	SD	NO. LABS	SDI	LIMITS OF ACCEPTABILITY LOWER	LIMITS OF ACCEPTABILITY UPPER	QTR	PLOTS OF THE RELATIVE DISTANCE OF YOUR RESULTS FROM TARGETS AS PERCENTAGES OF ALLOWED DEVIATION (-100=LOWER LIMIT, 0=TARGET, +100=UPPER LIMIT) -100 -75 -50 -25 0 25 50 75 100
APOLIPOPROTEIN A1	C-26									91C	
MG/DL	C-27										
TEST NOT PERFORMED										91B	
NOT GIVEN											
	C-26									91A	
	C-27										
NO COMPARATIVE METHOD											
APOLIPOPROTEIN B	C-26									91C	
MG/DL	C-27										
TEST NOT PERFORMED											
NOT GIVEN										91B	
	C-26									91A	
	C-27										
NO COMPARATIVE METHOD											
LDL CHOLESTEROL	C-26	215	10	221.9	16.8	2833	-0.4			91C	
MG/DL	C-27	127	10	137.9	12.1	2841	-0.9				
TRIGLYCERIDE /5										91B	
	C-26									91A	
NO COMPARATIVE METHOD	C-27										

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COMPREHENSIVE CHEMISTRY

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CONSTITUENT / UNIT OF MEASURE / YOUR REPORTED METHOD / COMPARATIVE METHOD	SPECIMEN	YOUR RESULT	EVAL CODE	MEAN	SD	NO. LABS	SDI	LIMITS OF ACCEPTABILITY LOWER	UPPER	QTR	PLOTS OF THE RELATIVE DISTANCE OF YOUR RESULTS FROM TARGETS AS PERCENTAGES OF ALLOWED DEVIATION (-100=LOWER LIMIT, 0=TARGET, +100=UPPER LIMIT)
CHOLESTEROL L	C-26	295	13	292.1	7.9	338	+0.4	262 -	322	91C	
MG/DL	C-27	174	13	175.2	4.8	336	-0.3	157 -	193		
ENZYMATIC	C-28	209	13	209.1	5.3	334	+0.0	188 -	230		
BECKMAN SYNCHRON CX4/5	C-29	194	13	187.5	5.1	337	+1.3	168 -	207	91B	
	C-30	255	13	257.1	7.0	337	-0.3	231 -	283		
	C-26			299.0	15.6	4952	-0.3			91A	
ENZYMATIC	C-27			181.7	10.4	4956	-0.7				
ALL MULTICON ANALYZERS	C-28			216.5	11.9	4977	-0.6				
	C-29			195.8	11.5	4977	-0.2				
	C-30			266.3	15.4	4920	-0.7				
HDL CHOLESTEROL (L)	C-26H	35	23	36.8	4.7	898	-0.4	22 -	51	91C	
MG/DL	C-27H	20	23	16.9	3.5	894	+0.9	6 -	28		
DEX SUL 50,000MW /MG	C-28H	33	23	36.8	4.7	895	-0.8	22 -	51		
BECKMAN SYNCHRON CX4/5	C-29H	26	23	27.7	4.2	898	-0.4	15 -	41	91B	
	C-30H	21	23	16.9	3.5	894	+1.2	6 -	28		
	C-26H									91A	
	C-27H										
NO COMPARATIVE METHOD	C-28H										
	C-29H										
	C-30H										
TRIGLYCERIDE (L)	C-26	201	13	208.4	11.5	241	-0.6	173 -	243	91C	
MG/DL	C-27	128	13	130.5	6.9	236	-0.4	109 -	152		
ENZ-COLOR W/OGB W/OSB	C-28	157	13	156.7	6.9	238	+0.0	136 -	178		
BECKMAN SYNCHRON CX4/5	C-29	110	13	112.1	7.0	240	-0.3	91 -	134	91B	
	C-30	181	13	184.1	7.9	236	-0.4	160 -	208		
	C-26									91A	
	C-27										
NO COMPARATIVE METHOD	C-28										
	C-29										
	C-30										

CAP NUMBER: 38988-01-01-01 KIT# 01

COMPREHENSIVE CHEMISTRY

E V A L U A T I O N

CONSTITUENT / UNIT OF MEASURE / YOUR REPORTED METHOD / COMPARATIVE METHOD	SPECIMEN	YOUR RESULT	EVAL CODE	MEAN	SD	NO. LABS	SDI	LIMITS OF ACCEPTABILITY LOWER	LIMITS OF ACCEPTABILITY UPPER	QTR	PLOTS OF THE RELATIVE DISTANCE OF YOUR RESULTS FROM TARGETS AS PERCENTAGES OF ALLOWED DEVIATION -100=LOWER LIMIT 0=TARGET +100=UPPER LIMIT (-100 -75 -50 -25 0 25 50 75 100)
BILIRUBIN, DIRECT MG/DL TEST NOT PERFORMED NOT GIVEN	C-94									91C 91B	
NO COMPARATIVE METHOD	C-94									91A	
BILIRUBIN, TOTAL MG/DL DIAZO J-G W/O BLANK BECKMAN SYNCHRON CX4/5	C-94	6.0	10	6.01	.18	251	-0.1			91C 91B	
ALL METHOD PRINCIPLES ALL INSTRUMENTS	C-94			5.72	.36	5051	+0.5			91A	
AMMONIA UMOL/L GLUTAMATE DEHYDROGENAS BECKMAN SYNCHRON CX4/5	C-98	28	10	30.0	6.0	52	-0.3			91C 91B	
NO COMPARATIVE METHOD	C-98									91A	

1-2-92

College of American Pathologists
325 Waukegan Road Northfield, Illinois 60093-2750
800/323-4040

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COMPREHENSIVE CHEMISTRY

E V A L U A T I O N

SURVEY SET: C - D
CAP NUMBER: 38988-01-01-01 KIT# 01
ATTENTION:
INSTITUTION: PENNINGTON BIOMEDICAL RSCH CTR

KIT MAILED: 12/16/91
QUEST. EVAL: 2/08/92

PENNINGTON BIOMEDICAL RSCH CTR
CLINICAL RESEARCH LABORATORY
6400 PERKINS RD.
BATON ROUGE LA 70808

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COMPREHENSIVE CHEMISTRY

E V A L U A T I O N

SURVEY SET: C - D
CAP NUMBER: 38988-01-01-01 KIT# 01
ATTENTION:
INSTITUTION: PENNINGTON BIOMEDICAL RSCH CTR

KIT MAILED: 12/16/91
QUEST. EVAL: 2/08/92

CONSTITUENT / UNIT OF MEASURE / YOUR REPORTED METHOD / COMPARATIVE METHOD	SPECIMEN	YOUR RESULT	EVAL CODE	MEAN	SD	NO. LABS	SDI	LIMITS OF ACCEPTABILITY LOWER	UPPER	QTR	PLOTS (-100=LOWER LIMIT, 0=TARGET, +100=UPPER LIMIT)
ALBUMIN	C-31	3.4	13	3.39	.09	294	+0.1	3.0 -	3.8	91D	1-1---1--11
G/DL	C-32	3.0	13	2.99	.09	298	+0.1	2.6 -	3.3		
DYE BINDING-BCP	C-33	3.4	13	3.56	.09	299	-1.8	3.2 -	4.0		
BECKMAN SYNCHRON CX4/5	C-34	3.9	13	4.06	.12	296	-1.3	3.6 -	4.5	91C	1--11-11
	C-35	2.8	13	2.85	.08	298	-0.6	2.5 -	3.2		
	C-31			3.46	.17	551	-0.4			91B	11--111
DYE BINDING-BCG W/RA	C-32			3.08	.17	552	-0.5				
ALL INSTRUMENTS	C-33			3.63	.18	551	-1.3				
	C-34			4.14	.20	548	-1.2			91A	2--2-1
	C-35			2.95	.17	543	-0.9				
BILIRUBIN, TOTAL	C-31	4.6	13	4.69	.16	250	-0.6	3.7 -	5.7	91D	1--121
MG/DL	C-32	1.2	13	1.26	.08	254	-0.8	.9 -	1.6		
DIAZO J-G W/O BLANK	C-33	4.7	13	4.90	.17	249	-1.2	3.9 -	5.9		
BECKMAN SYNCHRON CX4/5	C-34	5.4	13	5.57	.19	248	-0.9	4.4 -	6.7	91C	11-11--1
	C-35	1.1	13	1.21	.07	254	-1.6	.9 -	1.6		
	C-31			4.47	.36	5189	+0.4			91B	1----3----1
ALL METHOD PRINCIPLES	C-32			1.09	.12	5146	+0.9				
ALL INSTRUMENTS	C-33			4.69	.39	5199	+0.0				
	C-34			5.37	.45	5187	+0.1			91A	1--4
	C-35			1.04	.12	5149	+0.5				
CALCIUM-SERUM	C-31			12.11	.32	264	+0.3			91D	1-13
MG/DL	C-32			10.65	.28	263	-0.2				
ARSENAZO III DYE	C-33			12.64	.34	264	+0.5				
BECKMAN SYNCHRON CX4/5	C-34			14.27	.34	263	+0.7			91C	11--11------1
	C-35			10.24	.27	262	+0.2				
	C-31	12.2	14	11.91	.38	5284	+0.8	10.9 -	13.0	91B	1-2-1-----
ALL METHOD PRINCIPLES	C-32	10.6	14	10.49	.31	5294	+0.4	9.4 -	11.5		
ALL INSTRUMENTS	C-33	12.8	14	12.51	.41	527[illegible]	+0.7	11.5 -	13.6		
	C-34	14.5	14	14.22	.57	5300	+0.5	13.2 -	15.3	91A	1-1-1-----2
	C-35	10.3	14	10.07	.30	5256	+0.8	9.0 -	11.1		

College of American Pathologists
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800/323-4040

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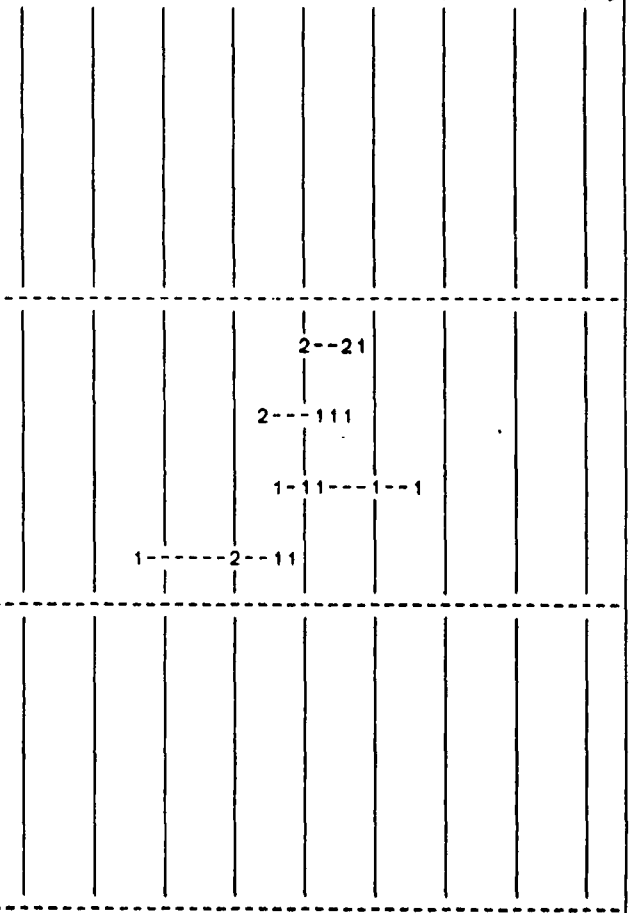
SURVEY SET: C - D
CAP NUMBER: 38988-01-01-01 KIT# 01

COMPREHENSIVE CHEMISTRY

E V A L U A T I O N

CONSTITUENT / UNIT OF MEASURE / YOUR REPORTED METHOD / COMPARATIVE METHOD	SPECIMEN	YOUR RESULT	EVAL CODE	MEAN	SD	NO. LABS	SDI	LIMITS OF ACCEPTABILITY LOWER	UPPER	QTR
IONIZED CALCIUM MMOL/L TEST NOT PERFORMED NOT GIVEN	C-31 C-32									91D 91C
NO COMPARATIVE METHOD	C-31 C-32									91B 91A
CHLORIDE MMOL/L ION SELEC./DILUTED BECKMAN SYNCHRON CX4/5	C-31			108.3	1.9	230	+0.4			91D
	C-32			105.1	1.5	227	+0.6			
	C-33			115.7	2.0	229	+0.2			
	C-34			132.9	2.4	231	-0.8			91C
	C-35			101.2	1.6	228	-0.1			
ALL CHLORIDE COMMON GP ALL AUTO CHEM INSTR	C-31	109	14	109.1	2.3	898	+0.0	103 -	115	91B
	C-32	106	14	105.0	2.1	896	+0.5	99 -	111	
	C-33	116	14	114.6	2.6	899	+0.5	108 -	121	
	C-34	131	14	129.8	3.7	894	+0.3	123 -	137	91A
	C-35	101	14	100.9	2.2	900	+0.0	95 -	106	
CO2 MMOL/L ION SELEC./DILUTED BECKMAN SYNCHRON CX4/5	C-31	28	10	28.6	1.1	229	-0.5			91D
	C-32	18	10	16.8	.9	231	+1.3			
NO COMPARATIVE METHOD	C-31 C-32									91C 91B 91A

PLOTS OF THE RELATIVE DISTANCE OF YOUR RESULTS FROM TARGETS AS PERCENTAGES OF ALLOWED DEVIATION
-100=LOWER LIMIT 0=TARGET +100=UPPER LIMIT



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SURVEY SET: C - D
CAP NUMBER: 38988-01-01-01 KIT# 01

COMPREHENSIVE CHEMISTRY

EVALUATION

CONSTITUENT / UNIT OF MEASURE / YOUR REPORTED METHOD / COMPARATIVE METHOD	SPECIMEN	YOUR RESULT	EVAL CODE	MEAN	SD	NO. LABS	SDI	LIMITS OF ACCEPTABILITY LOWER	LIMITS OF ACCEPTABILITY UPPER	QTR	PLOTS OF THE RELATIVE DISTANCE OF YOUR RESULTS FROM TARGETS AS PERCENTAGES OF ALLOWED DEVIATION (-100=LOWER LIMIT, 0=TARGET, +100=UPPER LIMIT)
CORTISOL - SERUM	C-31									91D	
MCG/DL	C-32									METHOD	
TEST NOT PERFORMED	C-33									CHANGE	
	C-34									91C	1 1
	C-35										
NO COMPARATIVE METHOD	C-31									91B	
	C-32										
	C-33										
	C-34									91A	
	C-35										
CREATININE-SERUM	C-31			4.65	.16	193	+0.3			91D	1112
MG/DL	C-32			1.27	.06	194	+0.5				
KINETIC ALK. PICRATE	C-33			4.85	.15	194	+0.3				
BECKMAN SYNCHRON CX4/5	C-34			5.51	.16	192	+1.2			91C	111--1---1
	C-35			1.24	.06	194	-0.7				
ALL METHOD PRINCIPLES	C-31	4.7	14	4.62	.21	5696	+0.4	3.9 -	5.4	91B	23
ALL INSTRUMENTS	C-32	1.3	14	1.25	.12	5759	+0.4	.9 -	1.6		
	C-33	4.9	14	4.86	.23	5700	+0.2	4.1 -	5.6		
	C-34	5.7	14	5.58	.31	5728	+0.4	4.7 -	6.5	91A	3-----2
	C-35	1.2	14	1.20	.12	5706	+0.0	.9 -	1.5		
GLUCOSE-SERUM	C-31			268.4	6.8	209	+0.4			91D	121-1
MG/DL	C-32			112.9	3.0	210	+0.0				
HEXOKINASE, UV	C-33			281.5	7.4	211	-0.1				
BECKMAN SYNCHRON CX4/5	C-34			321.0	8.1	210	-0.1			91C	1 11-1-1
	C-35			108.9	2.9	209	-0.3				
GLU OXIDASE O2 ELEC	C-31	271	14	257.7	6.3	828	+2.1	231 -	284	91B	112---1
ALL AUTO CHEM INSTR	C-32	113	14	108.3	2.8	825	+1.7	97 -	120		
	C-33	281	14	271.2	6.0	811	+1.6	244 -	299		
	C-34	320	14	308.8	6.9	814	+1.6	277 -	340	91A	122
	C-35	108	14	104.7	2.7	821	+1.2	94 -	116		

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SURVEY SET: C - D
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COMPREHENSIVE CHEMISTRY

E V A L U A T I O N

CONSTITUENT / UNIT OF MEASURE / YOUR REPORTED METHOD / COMPARATIVE METHOD	SPECIMEN	YOUR RESULT	EVAL CODE	MEAN	SD	NO. LABS	SDI	LIMITS OF ACCEPTABILITY LOWER	UPPER	QTR	PLOTS (-100=LOWER LIMIT, 0=TARGET, +100=UPPER LIMIT)
IRON	C-31	74	13	75.2	3.6	138	-0.3	60 -	91	91D	1-2---11
MCG/DL	C-32	66	13	66.8	3.9	141	-0.2	53 -	81		
FERRACHROME W/O PPR	C-33	72	13	78.2	4.2	139	-1.5	62 -	94		
BECKMAN SYNCHRON CX4/5	C-34	84	13	89.6	4.2	139	-1.3	71 -	108	91C	1121
	C-35	60	13	63.8	3.8	142	-1.0	51 -	77		
	C-31			79.9	6.5	3020	-0.9			91B	32
ALL METHOD PRINCIPLES	C-32			70.2	4.8	3025	-0.9				
ALL INSTRUMENTS	C-33			83.7	7.8	3034	-1.5				
	C-34			96.1	8.9	3006	-1.4			91A	1--1111
	C-35			67.3	5.0	3037	-1.5				
LACTIC ACID	C-31	2.7	23	2.31	.20	1445	(+2.0)	1.9 -	2.8	91D	1---1
MMOL/L	C-32	1.2	23	.84	.17	1440	(+2.1)	.5 -	1.2		
OXIDATION AUT											
BECKMAN SYNCHRON CX4/5										91C	
	C-31									91B	1-----1--------1
NO COMPARATIVE METHOD	C-32										
										91A	1--------1
LITHIUM	C-31									91D	
MMOL/L	C-32										
TEST NOT PERFORMED	C-33										
NOT GIVEN	C-34									91C	
	C-35										
	C-31			2.16	.14	1904				91B	
ALL METHOD PRINCIPLES	C-32			.50	.07	1917					
ALL INSTRUMENTS	C-33			2.30	.15	1918					
	C-34			2.67	.19	1918				91A	
	C-35			.46	.07	1907					

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COMPREHENSIVE CHEMISTRY

EVALUATION

CONSTITUENT / UNIT OF MEASURE / YOUR REPORTED METHOD / COMPARATIVE METHOD	SPECIMEN	YOUR RESULT	EVAL CODE	MEAN	SD	NO. LABS	SDI	LIMITS OF ACCEPTABILITY LOWER	LIMITS OF ACCEPTABILITY UPPER	QTR	PLOTS OF THE RELATIVE DISTANCE OF YOUR RESULTS FROM TARGETS AS PERCENTAGES OF ALLOWED DEVIATION (-100=LOWER LIMIT, 0=TARGET, +100=UPPER LIMIT)
MAGNESIUM	C-31	4.1	13	3.93	.13	255	+1.3	2.9	5.0	91D	1121
MG/DL	C-32	2.5	13	2.44	.09	257	+0.7	1.8	3.1		
CALMAGITE	C-33	4.2	13	4.12	.14	257	+0.6	3.0	5.2		
BECKMAN SYNCHRON CX4/5	C-34	4.7	13	4.71	.15	254	-0.1	3.5	5.9	91C	112-1
	C-35	2.4	13	2.35	.10	258	+0.5	1.7	3.0		
	C-31			3.68	.26	4101	+1.6			91B	41
ALL METHOD PRINCIPLES	C-32			2.28	.17	4095	+1.3				
ALL INSTRUMENTS	C-33			3.87	.27	4096	+1.2				
	C-34			4.43	.31	4091	+0.9			91A	21-2
	C-35			2.18	.17	4087	+1.3				
ONCOTIC PRESSURE	C-31									91D	
MM HG	C-32										
TEST NOT PERFORMED										91C	
NO COMPARATIVE METHOD	C-31									91B	
	C-32									91A	
OSMOLALITY-SERUM	C-31									91D	
MOSM/KG H2O	C-32										
TEST NOT PERFORMED										91C	
NO COMPARATIVE METHOD	C-31									91B	
	C-32									91A	

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COMPREHENSIVE CHEMISTRY

EVALUATION

CONSTITUENT / UNIT OF MEASURE / YOUR REPORTED METHOD / COMPARATIVE METHOD	SPECIMEN	YOUR RESULT	EVAL CODE	MEAN	SD	NO. LABS	SDI	LIMITS OF ACCEPTABILITY LOWER	UPPER	QTR	PLOTS OF THE RELATIVE DISTANCE OF YOUR RESULTS FROM TARGETS AS PERCENTAGES OF ALLOWED DEVIATION (-100=LOWER LIMIT, 0=TARGET, +100=UPPER LIMIT)
PHOSPHORUS-SERUM	C-31	7.9	13	7.75	.39	255	+0.4	6.9 -	8.6	91D	2-1
MG/DL	C-32	5.6	13	5.52	.30	256	+0.3	4.9 -	6.2		
PHOSPHOMOLYBDATE UV	C-33	8.2	13	8.12	.38	253	+0.2	7.2 -	9.0		
BECKMAN SYNCHRON CX4/5										91C	1-----1----------1
	C-31			7.09	.31	4735	+2.6			91B	2---1
ALL METHOD PRINCIPLES	C-32			5.22	.24	4782	+1.6				
ALL INSTRUMENTS	C-33			7.47	.34	4743	+2.1				
										91A	11-1
POTASSIUM-SERUM	C-31			5.36	.07	228	+0.6			91D	122
MMOL/L	C-32			3.79	.05	229	+0.2				
ION SELEC./DILUTED	C-33			5.65	.08	231	+0.6				
BECKMAN SYNCHRON CX4/5	C-34			6.48	.08	229	+0.3			91C	1-211
	C-35			3.64	.06	231	+1.0				
	C-31	5.4	14	5.36	.12	2715	+0.3	4.8 -	5.8	91B	2111
ALL POTASSIUM COMMON	C-32	3.8	14	3.81	.09	2705	-0.1	3.3 -	4.4		
ALL INSTRUMENTS	C-33	5.7	14	5.65	.12	2701	+0.4	5.1 -	6.2		
	C-34	6.5	14	6.48	.14	2698	+0.1	5.9 -	7.0	91A	1-2-11
	C-35	3.7	14	3.65	.09	2703	+0.6	3.1 -	4.2		
PROTEIN, TOTAL-SERUM	C-31	5.7	13	5.62	.10	316	+0.8	5.0 -	6.2	91D	1-21-1
G/DL	C-32	5.0	13	5.06	.10	315	-0.6	4.5 -	5.6		
BIURET	C-33	5.9	13	5.89	.11	315	+0.1	5.3 -	6.5		
BECKMAN SYNCHRON CX4/5	C-34	6.7	13	6.70	.12	313	+0.0	6.0 -	7.4	91C	1---2-1-1
	C-35	4.9	13	4.87	.10	310	+0.3	4.3 -	5.4		
	C-31			5.51	.24	5058	+0.8			91B	1-13
BIURET	C-32			5.03	.23	5052	-0.1				
ALL INSTRUMENTS	C-33			5.80	.26	5040	+0.4				
	C-34			6.61	.30	5047	+0.3			91A	2--21
	C-35			4.84	.23	4976	+0.3				

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COMPREHENSIVE CHEMISTRY

EVALUATION

CONSTITUENT / UNIT OF MEASURE / YOUR REPORTED METHOD / COMPARATIVE METHOD	SPECIMEN	YOUR RESULT	EVAL CODE	MEAN	SD	NO. LABS	SDI	LIMITS OF ACCEPTABILITY LOWER	UPPER	QTR	PLOTS OF THE RELATIVE DISTANCE OF YOUR RESULTS FROM TARGETS AS PERCENTAGES OF ALLOWED DEVIATION (-100=LOWER LIMIT, 0=TARGET, +100=UPPER LIMIT)
PREALBUMIN	C-31									91D	
MG/DL	C-32										
TEST NOT PERFORMED										91C	
NO COMPARATIVE METHOD	C-31									91B	
	C-32										
										91A	
SODIUM-SERUM	C-31			142.8	1.4	228	+1.6			91D	
MMOL/L	C-32			134.2	1.3	229	+0.6				
ION SELEC./DILUTED	C-33			148.4	1.6	229	+0.4				
BECKMAN SYNCHRON CX4/5	C-34			165.0	1.8	229	+0.0			91C	
	C-35			129.6	1.5	231	+0.3				
	C-31	145	14	142.9	1.7	2685	+1.2	138 -	147	91B	
ALL SODIUM COMMON GP	C-32	135	14	134.7	1.7	2673	+0.2	130 -	139		
ALL INSTRUMENTS	C-33	149	14	148.5	1.8	2684	+0.3	144 -	153		
	C-34	165	14	165.5	2.3	2669	-0.2	161 -	170	91A	
	C-35	130	14	130.0	1.8	2694	+0.0	126 -	134		
T-3 UPTAKE	C-31									91D	
% UPTAKE	C-32										
TEST NOT PERFORMED	C-33										
	C-34									91C	
	C-35										
NO COMPARATIVE METHOD	C-31									91B	
	C-32										
	C-33										
	C-34									91A	
	C-35										

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COMPREHENSIVE CHEMISTRY

E V A L U A T I O N

SURVEY SET: C - D
CAP NUMBER: 38988-01-01-01 KIT# 01

CONSTITUENT / UNIT OF MEASURE / YOUR REPORTED METHOD / COMPARATIVE METHOD	SPECIMEN	YOUR RESULT	EVAL CODE	MEAN	SD	NO. LABS	SDI	LIMITS OF ACCEPTABILITY LOWER	LIMITS OF ACCEPTABILITY UPPER	QTR	PLOTS OF THE RELATIVE DISTANCE OF YOUR RESULTS FROM TARGETS AS PERCENTAGES OF ALLOWED DEVIATION (-100=LOWER LIMIT, 0=TARGET, +100=UPPER LIMIT)
T UPTAKE / UPTAKE UNITS / TEST NOT PERFORMED	C-31									91D	
	C-32										
	C-33										
	C-34									91C	
	C-35										
NO COMPARATIVE METHOD	C-31									91B	
	C-32										
	C-33										
	C-34									91A	
	C-35										
THYROXINE / MCG/DL / TEST NOT PERFORMED	C-31									91D	
	C-32										
	C-33										
	C-34									91C	
	C-35										
NO COMPARATIVE METHOD	C-31									91B	
	C-32										
	C-33										
	C-34									91A	
	C-35										
TRANSFERRIN / MG/DL / TEST NOT PERFORMED	C-31									91D	
	C-32										
										91C	
NO COMPARATIVE METHOD	C-31									91B	
	C-32										
										91A	

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COMPREHENSIVE CHEMISTRY

E V A L U A T I O N

CONSTITUENT / UNIT OF MEASURE / YOUR REPORTED METHOD / COMPARATIVE METHOD	SPECIMEN	YOUR RESULT	EVAL CODE	MEAN	SD	NO. LABS	SDI	LIMITS OF ACCEPTABILITY LOWER	LIMITS OF ACCEPTABILITY UPPER	QTR	PLOTS OF THE RELATIVE DISTANCE OF YOUR RESULTS FROM TARGETS AS PERCENTAGES OF ALLOWED DEVIATION (-100=LOWER LIMIT, 0=TARGET, +100=UPPER LIMIT)
UREA - SERUM	C-31			46.6	1.3	231	+0.3			91D	1--1--3
MG N/DL	C-32			24.8	.8	230	+0.3				
UREASE WITH GLDH	C-33			48.7	1.5	230	+0.2				
BECKMAN SYNCHRON CX4/5	C-34			55.5	1.6	230	-0.3			91C	1-1----1--1-1
	C-35			23.8	.8	229	+0.3				
	C-31	47	14	45.5	2.1	3615	+0.7	41 -	50	91B	1-2----11
UREASE WITH GLDH	C-32	25	14	23.9	1.3	3614	+0.8	21 -	27		
ALL AUTO CHEM INSTR	C-33	49	14	48.0	2.2	3591	+0.5	43 -	53		
	C-34	55	14	54.8	2.5	3588	+0.1	49 -	60	91A	1-----2---2
	C-35	24	14	23.0	1.2	3592	+0.8	20 -	26		
URIC ACID	C-31			7.80	.16	320	+0.0			91D	1121
MG/DL	C-32			6.32	.13	318	-0.2				
URICASE	C-33			8.16	.17	320	-0.4				
BECKMAN SYNCHRON CX4/5	C-34			9.25	.19	320	-0.3			91C	1-21-1
	C-35			6.08	.13	319	-0.6				
	C-31	7.8	14	7.77	.40	5056	+0.1	6.4 -	9.1	91B	1-12-1
URICASE	C-32	6.3	14	6.43	.32	5007	-0.4	5.3 -	7.6		
ALL INSTRUMENTS	C-33	8.1	14	8.17	.43	5032	-0.2	6.7 -	9.6		
	C-34	9.2	14	9.31	.50	5030	-0.2	7.7 -	10.9	91A	1--2--2
	C-35	6.0	14	6.18	.32	5011	-0.6	5.1 -	7.3		
AMYLASE-SERUM	C-31	311	13	308.7	8.7	296	+0.3	282 -	335	91D	1112
IU/L	C-32	144	13	143.5	4.5	296	+0.1	130 -	157		
BECKMAN SYNCHRON CX4/5	C-33	324	13	324.1	9.2	295	+0.0	296 -	352		
BECKMAN/37 C	C-34	373	13	370.7	10.0	295	+0.2	340 -	401	91C	1121
	C-35	137	13	137.9	4.0	296	-0.2	125 -	150		
	C-31									91B	212
NO COMPARATIVE METHOD	C-32										
	C-33										
	C-34									91A	1---11---11
	C-35										

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COMPREHENSIVE CHEMISTRY

EVALUATION

CONSTITUENT / UNIT OF MEASURE / YOUR REPORTED METHOD / COMPARATIVE METHOD	SPECIMEN	YOUR RESULT	EVAL CODE	MEAN	SD	NO. LABS	SDI	LIMITS OF ACCEPTABILITY LOWER	UPPER	QTR	PLOTS OF THE RELATIVE DISTANCE OF YOUR RESULTS FROM TARGETS AS PERCENTAGES OF ALLOWED DEVIATION (-100=LOWER LIMIT, 0=TARGET, +100=UPPER LIMIT)
ALT SGPT	C-31	124	13	123.4	4.0	304	+0.2	98 -	149	91D	
IU/L	C-32	73	13	71.4	3.4	301	+0.5	57 -	86		
BECKMAN SYNCHRON CX4/5	C-33	131	13	130.1	4.2	303	+0.2	104 -	157		
BECKMAN/37 C	C-34	151	13	149.4	4.3	301	+0.4	119 -	180	91C	
	C-35	69	13	68.6	3.2	298	+0.1	54 -	83		
NO COMPARATIVE METHOD	C-31									91B	
	C-32										
	C-33										
	C-34									91A	
	C-35										
ALKALINE PHOSPHATASE	C-31	153	13	160.2	9.0	302	-0.8	133 -	188	91D	
IU/L	C-32	74	13	80.6	4.8	302	-1.4	66 -	95		
BECKMAN SYNCHRON CX4/5	C-33	157	13	168.0	9.9	303	-1.1	138 -	198		
BECKMAN/37 C	C-34	179	13	191.9	11.0	301	-1.2	158 -	225	91C	
	C-35	70	13	78.1	4.7	301	-1.7	64 -	93		
NO COMPARATIVE METHOD	C-31									91B	
	C-32										
	C-33										
	C-34									91A	
	C-35										
AST SGOT	C-31	137	13	132.9	4.5	315	+0.9	106 -	160	91D	
IU/L	C-32	59	13	56.8	2.7	314	+0.8	45 -	69		
BECKMAN SYNCHRON CX4/5	C-33	138	13	139.1	4.4	311	-0.3	111 -	167		
BECKMAN/37 C	C-34	160	13	157.6	5.0	314	+0.5	126 -	190	91C	
	C-35	55	13	55.2	2.6	307	-0.1	44 -	67		
NO COMPARATIVE METHOD	C-31									91B	
	C-32										
	C-33										
	C-34									91A	
	C-35										

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COMPREHENSIVE CHEMISTRY

E V A L U A T I O N

CONSTITUENT / UNIT OF MEASURE / YOUR REPORTED METHOD / COMPARATIVE METHOD	SPECIMEN	YOUR RESULT	EVAL CODE	MEAN	SD	NO. LABS	SDI	LIMITS OF ACCEPTABILITY LOWER	UPPER	PLOTS OF THE RELATIVE DISTANCE OF YOUR RESULTS FROM TARGETS AS PERCENTAGES OF ALLOWED DEVIATION (-100=LOWER LIMIT, 0=TARGET, +100=UPPER LIMIT) QTR
CREATINE KINASE	C-31	462	10			1				91D
IU/L	C-32	260	10			1				METHOD
BECKMAN SYNCHRON CX4/5	C-33	480	10			1				CHANGE
BECKMAN/45 C	C-34	550	10			1				91C
	C-35	246	10			1				
NO COMPARATIVE METHOD	C-31									91B
	C-32									
	C-33									
	C-34									91A
	C-35									
GAMMA GLUTAMYL TRANS	C-31	173	10	172.4	6.3	264	+0.1			91D
IU/L	C-32	65	10	67.1	2.7	264	-0.8			
BECKMAN SYNCHRON CX4/5										
BECKMAN/37 C										91C
NO COMPARATIVE METHOD	C-31									91B
	C-32									
										91A
LACTATE DEHYDROGENASE	C-31	325	13	329.1	11.5	302	-0.4	263 -	395	91D
IU/L	C-32	164	13	165.7	6.4	304	-0.3	132 -	199	
BECKMAN SYNCHRON CX4/5	C-33	334	13	343.3	12.5	305	-0.7	274 -	412	
BECKMAN/37 C	C-34	379	13	388.9	13.2	301	-0.8	311 -	467	91C
	C-35	152	13	155.6	6.4	300	-0.6	124 -	187	
NO COMPARATIVE METHOD	C-31									91B
	C-32									
	C-33									
	C-34									91A
	C-35									

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THE COLLEGE OF AMERICAN PATHOLOGISTS RECOMMENDS THAT THE RESULTS OF THIS INTERLABORATORY COMPARISON NOT BE USED AS A SOLE CRITERION FOR JUDGING THE PERFORMANCE OF ANY INDIVIDUAL

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COMPREHENSIVE CHEMISTRY

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SURVEY SET: C - D
CAP NUMBER: 38988-01-01-01 KIT# 01

CONSTITUENT / UNIT OF MEASURE / YOUR REPORTED METHOD / COMPARATIVE METHOD	SPECIMEN	YOUR RESULT	EVAL CODE	MEAN	SD	NO. LABS	SDI	LIMITS OF ACCEPTABILITY LOWER	LIMITS OF ACCEPTABILITY UPPER	PLOTS OF THE RELATIVE DISTANCE OF YOUR RESULTS FROM TARGETS AS PERCENTAGES OF ALLOWED DEVIATION (-100=LOWER LIMIT, 0=TARGET, +100=UPPER LIMIT) QTR
APOLIPOPROTEIN A1 MG/DL TEST NOT PERFORMED	C-36 C-37									91D 91C
NO COMPARATIVE METHOD	C-36 C-37									91B 91A
APOLIPOPROTEIN B MG/DL TEST NOT PERFORMED	C-36 C-37									91D 91C
NO COMPARATIVE METHOD	C-36 C-37									91B 91A
LDL CHOLESTEROL MG/DL TRIGLYCERIDE /5	C-36 C-37	204 130	10 10	211.5 138.0	16.8 12.1	2708 2712	-0.4 -0.7			91D 91C
NO COMPARATIVE METHOD	C-36 C-37									91B 91A

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COMPREHENSIVE CHEMISTRY

E V A L U A T I O N

SURVEY SET: C - D
CAP NUMBER: 38988-01-01-01 KIT# 01

CONSTITUENT / UNIT OF MEASURE / YOUR REPORTED METHOD / COMPARATIVE METHOD	SPECIMEN	YOUR RESULT	EVAL CODE	MEAN	SD	NO. LABS	SDI	LIMITS OF ACCEPTABILITY LOWER	UPPER	QTR	PLOTS OF THE RELATIVE DISTANCE OF YOUR RESULTS FROM TARGETS AS PERCENTAGES OF ALLOWED DEVIATION (-100=LOWER LIMIT, 0=TARGET, +100=UPPER LIMIT)
CHOLESTEROL L	C-36	260	13	257.5	7.1	307	+0.4	231 -	284	91D	
MG/DL	C-37	177	13	175.3	4.7	304	+0.4	157 -	193		
ENZYMATIC	C-38	293	13	291.7	7.8	303	+0.2	262 -	321		
BECKMAN SYNCHRON CX4/5	C-39	189	13	187.4	5.6	308	+0.3	168 -	207	91C	
	C-40	209	13	209.0	5.8	305	+0.0	188 -	230		
	C-36			266.1	15.5	4639	-0.4			91B	
ENZYMATIC	C-37			181.9	10.4	4628	-0.5				
ALL MULTICON ANALYZERS	C-38			299.8	15.5	4610	-0.4				
	C-39			195.9	12.1	4705	-0.6			91A	
	C-40			216.8	12.7	4670	-0.6				
HDL CHOLESTEROL (L)	C-36H	20	23	17.2	3.5	913	+0.8	6 -	28	91D	
MG/DL	C-37H	21	23	17.2	3.4	912	+1.1	7 -	28		
DEX SUL 50,000MW /MG	C-38H	37	23	37.4	4.7	920	-0.1	23 -	52		
BECKMAN SYNCHRON CX4/5	C-39H	31	23	26.5	4.6	917	+1.0	12 -	41	91C	
	C-40H	37	23	37.5	4.6	918	-0.1	23 -	52		
	C-36H									91B	
NO COMPARATIVE METHOD	C-37H										
	C-38H										
	C-39H									91A	
	C-40H										
TRIGLYCERIDE (L)	C-36	181	13	189.6	10.3	214	-0.8	158 -	221	91D	
MG/DL	C-37	132	13	135.9	8.1	218	-0.5	111 -	161		
ENZ-COLOR W/OGB W/OSB	C-38	202	13	207.9	9.4	215	-0.6	179 -	237		
BECKMAN SYNCHRON CX4/5	C-39	114	13	114.8	7.4	218	-0.1	92 -	137	91C	
	C-40	157	13	162.1	8.5	215	-0.6	136 -	188		
	C-36									91B	
NO COMPARATIVE METHOD	C-37										
	C-38										
	C-39									91A	
	C-40										

19
2-209

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SURVEY SET: C - D
CAP NUMBER: 38988-01-01-01 KIT# 01

COMPREHENSIVE CHEMISTRY

E V A L U A T I O N

CONSTITUENT / UNIT OF MEASURE / YOUR REPORTED METHOD / COMPARATIVE METHOD	SPECIMEN	YOUR RESULT	EVAL CODE	MEAN	SD	NO. LABS	SDI	LIMITS OF ACCEPTABILITY LOWER	LIMITS OF ACCEPTABILITY UPPER	QTR	PLOTS OF THE RELATIVE DISTANCE OF YOUR RESULTS FROM TARGETS AS PERCENTAGES OF ALLOWED DEVIATION (-100=LOWER LIMIT, 0=TARGET, +100=UPPER LIMIT)
BILIRUBIN, DIRECT MG/DL TEST NOT PERFORMED NOT GIVEN	C-95									91D	
										91C	
NO COMPARATIVE METHOD	C-95									91B	
										91A	
BILIRUBIN, TOTAL MG/DL DIAZO J-G W/O BLANK BECKMAN SYNCHRON CX4/5	C-95	3.9	10	3.92	.18	228	-0.1			91D	
										91C	
ALL METHOD PRINCIPLES ALL INSTRUMENTS	C-95			3.68	.41	4875	+0.5			91B	
										91A	
AMMONIA UMOL/L TEST NOT PERFORMED NOT GIVEN	C-99									91D	
										91C	
NO COMPARATIVE METHOD	C-99									91B	
										91A	

College of American Pathologists
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COMPREHENSIVE CHEMISTRY

E V A L U A T I O N

SURVEY SET: C - D
CAP NUMBER: 38988-01-01-01 KIT# 01

PENNINGTON BIOMEDICAL RSCH CTR
CLINICAL RESEARCH LABORATORY
6400 PERKINS RD.
BATON ROUGE LA 70808

IF YOU HAVE SUBMITTED YOUR 1992 ORDER, YOUR NEXT CHEMISTRY SURVEY KIT (C1-A, C2-A, C3-A, C4-A OR C5-A) IS SCHEDULED TO BE SHIPPED ON MARCH 16, 1992.

CHECKED BY ..... DATE REVIEWED .....

College of American Pathologists
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800/323-4040

1992

CHEMISTRY-SERIES 3

EVALUATION

SURVEY SET: C3 - A
CAP NUMBER: 38988-01-01-01 KIT# 01
ATTENTION:
INSTITUTION: PENNINGTON BIOMEDICAL RSCH CTR

KIT MAILED: 3/16/92
QUEST. EVAL: 5/16/92

COPIES SENT TO: LOUISIANA

PENNINGTON BIOMEDICAL RSCH CTR
CLINICAL RESEARCH LABORATORY
6400 PERKINS RD.
BATON ROUGE LA 70808

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800/323-4040

1992

CHEMISTRY-SERIES 3

EVALUATION

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CONSTITUENT / UNIT OF MEASURE / YOUR REPORTED METHOD / COMPARATIVE METHOD	SPECIMEN	YOUR RESULT	EVAL CODE	MEAN	SD	NO. LABS	SDI	LIMITS OF ACCEPTABILITY LOWER	LIMITS OF ACCEPTABILITY UPPER	QTR	PLOTS OF THE RELATIVE DISTANCE OF YOUR RESULTS FROM TARGETS AS PERCENTAGES OF ALLOWED DEVIATION (-100=LOWER LIMIT, 0=TARGET, +100=UPPER LIMIT) -100 -75 -50 -25 0 25 50 75 100
ALBUMIN G/DL DYE BINDING-BCP BECKMAN SYNCHRON CX4/5	C-01	2.8	13	2.92	.10	334	-1.2	2.6	3.3		
	C-02	3.8	13	3.90	.14	335	-0.7	3.5	4.3	92A	1111-1
	C-03	3.0	13	3.19	.11	332	-1.7	2.8	3.6		
	C-04	4.1	13	4.25	.13	330	-1.2	3.8	4.7		
	C-05	2.9	13	3.05	.10	333	-1.5	2.7	3.4	91D	1-1---1--11
DYE BINDING-BCG W/RA ALL INSTRUMENTS	C-01			2.95	.15	590	-1.0			91C	1--11-11
	C-02			3.86	.18	588	-0.3				
	C-03			3.22	.16	588	-1.4				
	C-04			4.20	.18	587	-0.6			91B	11--111
	C-05			3.09	.15	583	-1.3				
BILIRUBIN, TOTAL MG/DL DIAZO J-G W/O BLANK BECKMAN SYNCHRON CX4/5	C-01	1.3	13	1.18	.08	294	+1.5	.8	1.5		
	C-02	5.4	13	5.12	.15	282	+1.9	4.1	6.2	92A	111-2
	C-03	1.4	13	1.28	.08	291	+1.5	.9	1.6		
	C-04	5.9	13	5.54	.16	282	+2.3	4.4	6.7		
	C-05	1.3	13	1.23	.08	288	+0.9	.9	1.6	91D	1--121
ALL METHOD PRINCIPLES ALL INSTRUMENTS	C-01			1.02	.12	5691	+2.3			91C	11-11--1
	C-02			5.01	.40	5710	+1.0				
	C-03			1.11	.12	5664	+2.4				
	C-04			5.44	.44	5714	+1.0			91B	1----3----1
	C-05			1.06	.12	5667	+2.0				
CALCIUM-SERUM MG/DL ARSENAZO III DYE BECKMAN SYNCHRON CX4/5	C-01			9.78	.25	302	+0.5				
	C-02			12.66	.29	304	+0.8			92A	1------1111
	C-03			10.64	.25	301	+0.2				
	C-04			13.65	.32	304	-0.8				
	C-05			10.32	.26	301	+0.3			91D	1-13
ALL METHOD PRINCIPLES ALL INSTRUMENTS	C-01	9.9	14	9.58	.29	5928	+1.1	8.5	10.6	91C	11--11------1
	C-02	12.9	14	12.53	.44	5903	+0.8	11.5	13.6		
	C-03	10.7	14	10.50	.31	5897	+0.6	9.5	11.5		
	C-04	13.4	14	13.59	.55	5922	-0.3	12.5	14.6	91B	1-2-1----1
	C-05	10.4	14	10.15	.30	5894	+0.8	9.1	11.2		

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1992

CHEMISTRY-SERIES 3

EVALUATION

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ATTENTION:
INSTITUTION: PENNINGTON BIOMEDICAL RSCH CTR

KIT MAILED: 3/16/92
QUEST. EVAL: 5/16/92

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CONSTITUENT / UNIT OF MEASURE / YOUR REPORTED METHOD / COMPARATIVE METHOD	SPECIMEN	YOUR RESULT	EVAL CODE	MEAN	SD	NO. LABS	SDI	LIMITS OF ACCEPTABILITY LOWER	UPPER	QTR	PLOTS OF THE RELATIVE DISTANCE OF YOUR RESULTS FROM TARGETS AS PERCENTAGES OF ALLOWED DEVIATION (-100=LOWER LIMIT, 0=TARGET, +100=UPPER LIMIT)
CHLORIDE MMOL/L ION SELEC./DILUTED BECKMAN SYNCHRON CX4/5	C-01			99.7	1.8	261	+0.2				
	C-02			119.6	1.9	261	+0.2			92A	1----1--1--11
	C-03			110.7	1.7	258	+0.2				
	C-04			131.1	2.4	261	-0.5				
	C-05			106.5	1.7	260	-0.3			91D	2--21
ALL CHLORIDE COMMON GP ALL AUTO CHEM INSTR	C-01	100	14	101.0	2.1	939	-0.5	96 -	107	91C	2---111
	C-02	120	14	117.9	2.9	945	+0.7	112 -	124		
	C-03	111	14	109.8	2.3	928	+0.5	104 -	116		
	C-04	130	14	127.6	3.6	936	+0.7	121 -	134	91B	1-11---1--1
	C-05	106	14	105.7	2.3	931	+0.1	100 -	111		
CORTISOL - SERUM MCG/DL TEST NOT PERFORMED	C-01										
	C-02									92A	
	C-03										
	C-04										
	C-05									91D	
										METHOD CHANGE	
ALL REAGENT MANUF	C-01			8.69	.98	1110				91C	1----------1----------H
	C-02			24.25	2.80	1110					
	C-03			9.49	1.03	1113					
	C-04			26.19	2.94	1101				91B	
	C-05			9.08	.99	1109					
CO2 MMOL/L ION SELEC./DILUTED BECKMAN SYNCHRON CX4/5	C-01	19	10	17.2	.9	255	+2.0				
	C-02	30	10	28.3	.9	257	+1.9			92A	
										91D	
NO COMPARATIVE METHOD	C-01									91C	
	C-02										
										91B	

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CREATININE-SERUM MG/DL KINETIC ALK. PICRATE BECKMAN SYNCHRON CX4/5	C-01			1.19	.06	219	+1.8				
	C-02			5.05	.14	219	+1.1			92A	111-1--1
	C-03			1.29	.06	219	+0.2				
	C-04			5.47	.16	218	+0.8				
	C-05			1.23	.07	219	+1.0			91D	1112
ALL METHOD PRINCIPLES ALL INSTRUMENTS	C-01	1.3	14	1.16	.11	6443	+1.3	.8 -	1.5	91C	111--1---1
	C-02	5.2	14	5.09	.22	6390	+0.5	4.3 -	5.9		
	C-03	1.3	14	1.27	.12	6463	+0.3	.9 -	1.6		
	C-04	5.6	14	5.56	.27	6407	+0.1	4.7 -	6.4	91B	23
	C-05	1.3	14	1.21	.12	6428	+0.8	.9 -	1.6		
GLUCOSE-SERUM MG/DL HEXOKINASE, UV BECKMAN SYNCHRON CX4/5	C-01			106.4	2.7	238	+0.2				
	C-02			297.0	7.2	238	-0.3			92A	1-1-11-1
	C-03			116.7	2.8	238	-0.3				
	C-04			323.6	8.3	239	-0.7				
	C-05			111.8	2.9	235	-0.3			91D	121-1
GLU OXIDASE O2 ELEC ALL AUTO CHEM INSTR	C-01	107	14	102.1	2.7	1001	+1.8	91 -	113	91C	1-11-1-1
	C-02	295	14	289.8	6.5	1001	+0.8	260 -	319		
	C-03	116	14	112.1	2.8	995	+1.4	100 -	124		
	C-04	318	14	315.5	7.5	1006	+0.3	284 -	348	91B	112---1
	C-05	111	14	107.6	2.7	995	+1.3	96 -	119		
IONIZED CALCIUM MMOL/L TEST NOT PERFORMED NOT GIVEN	C-01										
	C-02									92A	
										91D	
NO COMPARATIVE METHOD	C-01									91C	
	C-02										
										91B	

THE COLLEGE OF AMERICAN PATHOLOGISTS RECOMMENDS THAT THE RESULTS OF THIS INTERLABORATORY COMPARISON NOT BE USED AS A SOLE CRITERION FOR JUDGING THE PERFORMANCE OF ANY INDIVIDUAL

SURVEY SET: C3 - A
CAP NUMBER: 38988-01-01-01 KIT# 01
ATTENTION:
INSTITUTION: PENNINGTON BIOMEDICAL RSCH CTR

CHEMISTRY-SERIES 3

E V A L U A T I O N

KIT MAILED: 3/16/92
QUEST. EVAL: 5/16/92

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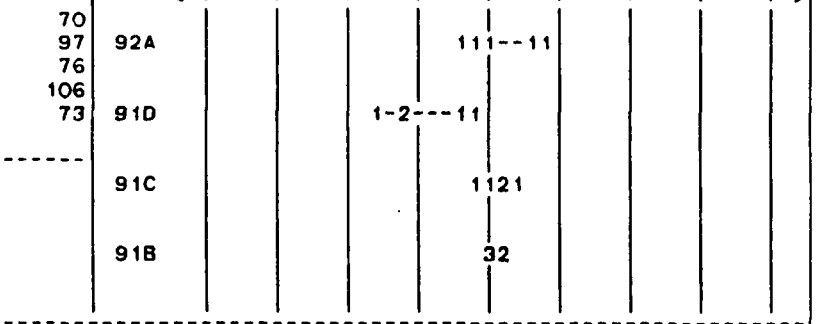
CONSTITUENT / UNIT OF MEASURE / YOUR REPORTED METHOD / COMPARATIVE METHOD	SPECIMEN	YOUR RESULT	EVAL CODE	MEAN	SD	NO. LABS	SDI	LIMITS OF ACCEPTABILITY LOWER	UPPER	QTR
	C-01	60	13	58.2	3.5	144	+0.5	46 -	70	
IRON	C-02	81	13	80.8	4.7	143	+0.0	64 -	97	92A
MCG/DL	C-03	62	13	62.7	4.0	144	-0.2	50 -	76	
FERRACHROME W/O PPR	C-04	86	13	88.1	4.7	144	-0.4	70 -	106	
BECKMAN SYNCHRON CX4/5	C-05	63	13	60.5	3.7	144	+0.7	48 -	73	91D
	C-01			61.8	4.9	3350	-0.4			91C
ALL METHOD PRINCIPLES	C-02			85.9	6.5	3311	-0.8			
ALL INSTRUMENTS	C-03			67.6	4.8	3293	-1.2			
	C-04			93.9	7.1	3312	-1.1			91B
	C-05			64.9	4.9	3312	-0.4			
	C-01	1.7	23	1.40	.18	1575	+1.7	1.0 -	1.8	
LACTIC ACID	C-02	3.6	23	3.33	.24	1573	+1.1	2.8 -	3.9	92A
MMOL/L										
OXIDATION AUT										
BECKMAN SYNCHRON CX4/5										91D
	C-01									91C
NO COMPARATIVE METHOD	C-02									
										91B
	C-01									
LITHIUM	C-02									92A
MMOL/L	C-03									
TEST NOT PERFORMED	C-04									
NOT GIVEN	C-05									91D
	C-01			.46	.07	1999				91C
ALL METHOD PRINCIPLES	C-02			2.81	.16	1977				
ALL INSTRUMENTS	C-03			.52	.07	1995				
	C-04			3.09	.20	1987				91B
	C-05			.50	.07	1999				

PLOTS OF THE RELATIVE DISTANCE OF YOUR RESULTS FROM TARGETS AS PERCENTAGES OF ALLOWED DEVIATION
-100=LOWER LIMIT 0=TARGET +100=UPPER LIMIT



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CHEMISTRY-SERIES 3

E V A L U A T I O N

SURVEY SET: C3 - A
CAP NUMBER: 38988-01-01-01 KIT# 01
ATTENTION:
INSTITUTION: PENNINGTON BIOMEDICAL RSCH CTR

KIT MAILED: 3/16/92
QUEST. EVAL: 5/16/92

COPIES SENT TO: LOUISIANA

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MAGNESIUM MG/DL CALMAGITE BECKMAN SYNCHRON CX4/5	C-01	2.2	13	2.14	.09	269	+0.7	1.6 -	2.7		
	C-02	3.7	13	3.63	.11	268	+0.6	2.7 -	4.6	92A	23
	C-03	2.4	13	2.34	.08	270	+0.8	1.7 -	3.0		
	C-04	4.0	13	3.94	.13	268	+0.5	2.9 -	5.0		
	C-05	2.3	13	2.25	.08	270	+0.6	1.6 -	2.9	91D	1121
ALL METHOD PRINCIPLES ALL INSTRUMENTS	C-01			1.99	.15	4500	+1.4			91C	112-1
	C-02			3.39	.23	4515	+1.3				
	C-03			2.18	.17	4509	+1.3				
	C-04			3.70	.25	4496	+1.2			91B	41
	C-05			2.09	.16	4498	+1.3				
ONCOTIC PRESSURE MM HG TEST NOT PERFORMED	C-01										
	C-02									92A	
										91D	
NO COMPARATIVE METHOD	C-01									91C	
	C-02										
										91B	
OSMOLALITY-SERUM MOSM/KG H2O TEST NOT PERFORMED	C-01										
	C-02									92A	
										91D	
NO COMPARATIVE METHOD	C-01									91C	
	C-02										
										91B	

SURVEY SET: C3 - A
CAP NUMBER: 38988-01-01-01 KIT# 01
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CHEMISTRY-SERIES 3

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PHOSPHORUS-SERUM MG/DL PHOSPHOMOLYBDATE UV BECKMAN SYNCHRON CX4/5	C-01	5.1	13	4.83	.30	284	+0.9	4.3	5.4	92A	1------1
	C-02	8.0	13	7.90	.41	286	+0.2	7.0	8.8	91D	2-1
ALL METHOD PRINCIPLES ALL INSTRUMENTS	C-01			4.55	.25	5122	+2.2			91C	1-----1----------1
	C-02			7.33	.31	5055	+2.2			91B	2---1
POTASSIUM-SERUM MMOL/L ION SELEC./DILUTED BECKMAN SYNCHRON CX4/5	C-01			3.50	.05	252	+0.0			92A	1-211
	C-02			5.94	.07	260	-0.6			91D	122
	C-03			3.84	.06	259	+1.0			91C	1-211
	C-04			6.48	.08	258	-1.0			91B	2111
	C-05			3.69	.05	255	+0.2				
ALL POTASSIUM COMMON ALL INSTRUMENTS	C-01	3.5	14	3.52	.08	3099	-0.3	3.0	4.1		
	C-02	5.9	14	5.94	.13	3114	-0.3	5.4	6.5		
	C-03	3.9	14	3.86	.09	3114	+0.4	3.3	4.4		
	C-04	6.4	14	6.48	.14	3109	-0.6	5.9	7.0		
	C-05	3.7	14	3.70	.09	3105	+0.0	3.2	4.2		
PREALBUMIN MG/DL TEST NOT PERFORMED	C-01									92A	
	C-02									91D	
NO COMPARATIVE METHOD	C-01									91C	
	C-02									91B	

1 9 9 2

CHEMISTRY-SERIES 3

E V A L U A T I O N

SURVEY SET: C3 - A
CAP NUMBER: 38988-01-01-01 KIT# 01
ATTENTION:
INSTITUTION: PENNINGTON BIOMEDICAL RSCH CTR

KIT MAILED: 3/16/92
QUEST. EVAL: 5/16/92

COPIES SENT TO: LOUISIANA

CONSTITUENT / UNIT OF MEASURE / YOUR REPORTED METHOD / COMPARATIVE METHOD	SPECIMEN	YOUR RESULT	EVAL CODE	MEAN	SD	NO. LABS	SDI	LIMITS OF ACCEPTABILITY LOWER	LIMITS OF ACCEPTABILITY UPPER	QTR	PLOTS OF THE RELATIVE DISTANCE OF YOUR RESULTS FROM TARGETS AS PERCENTAGES OF ALLOWED DEVIATION (-100=LOWER LIMIT, 0=TARGET, +100=UPPER LIMIT)
PROTEIN, TOTAL-SERUM G/DL BIURET BECKMAN SYNCHRON CX4/5	C-01	4.8	13	4.78	.10	346	+0.2	4.3	5.3		
	C-02	6.2	13	6.13	.11	346	+0.6	5.5	6.8	92A	221
	C-03	5.2	13	5.19	.09	344	+0.1	4.6	5.8		
	C-04	6.7	13	6.65	.12	344	+0.4	5.9	7.4		
	C-05	5.0	13	5.00	.10	343	+0.0	4.5	5.5	91D	1-21-1
BIURET ALL INSTRUMENTS	C-01			4.74	.21	5585	+0.3			91C	1---2-1-1
	C-02			6.11	.27	5580	+0.3				
	C-03			5.18	.24	5564	+0.1				
	C-04			6.64	.31	5573	+0.2			91B	1-13
	C-05			4.98	.23	5560	+0.1				
SODIUM-SERUM MMOL/L ION SELEC./DILUTED BECKMAN SYNCHRON CX4/5	C-01			129.4	1.3	256	+1.2				
	C-02			155.4	1.5	257	+0.4			92A	1--11-1--1
	C-03			139.4	1.3	258	+0.5				
	C-04			166.3	1.7	254	-0.2				
	C-05			134.8	1.3	258	+0.9			91D	1-111-------1
ALL SODIUM COMMON GP ALL INSTRUMENTS	C-01	131	14	129.7	1.7	3103	+0.8	125	134	91C	1--2----1-1
	C-02	156	14	155.7	1.9	3097	+0.2	151	160		
	C-03	140	14	139.9	1.8	3100	+0.1	135	144		
	C-04	166	14	166.7	2.4	3089	-0.3	162	171	91B	1--111----1
	C-05	136	14	135.2	1.7	3103	+0.5	131	140		
T-3 UPTAKE % UPTAKE TEST NOT PERFORMED	C-01										
	C-02									92A	
	C-03										
	C-04										
	C-05									91D	
ALL REAGENT MANUF	C-01			42.44	4.09	1744				91C	
	C-02			34.74	3.09	1750					
	C-03			41.37	4.23	1749					
	C-04			33.61	3.10	1751				91B	
	C-05			41.80	4.27	1746					

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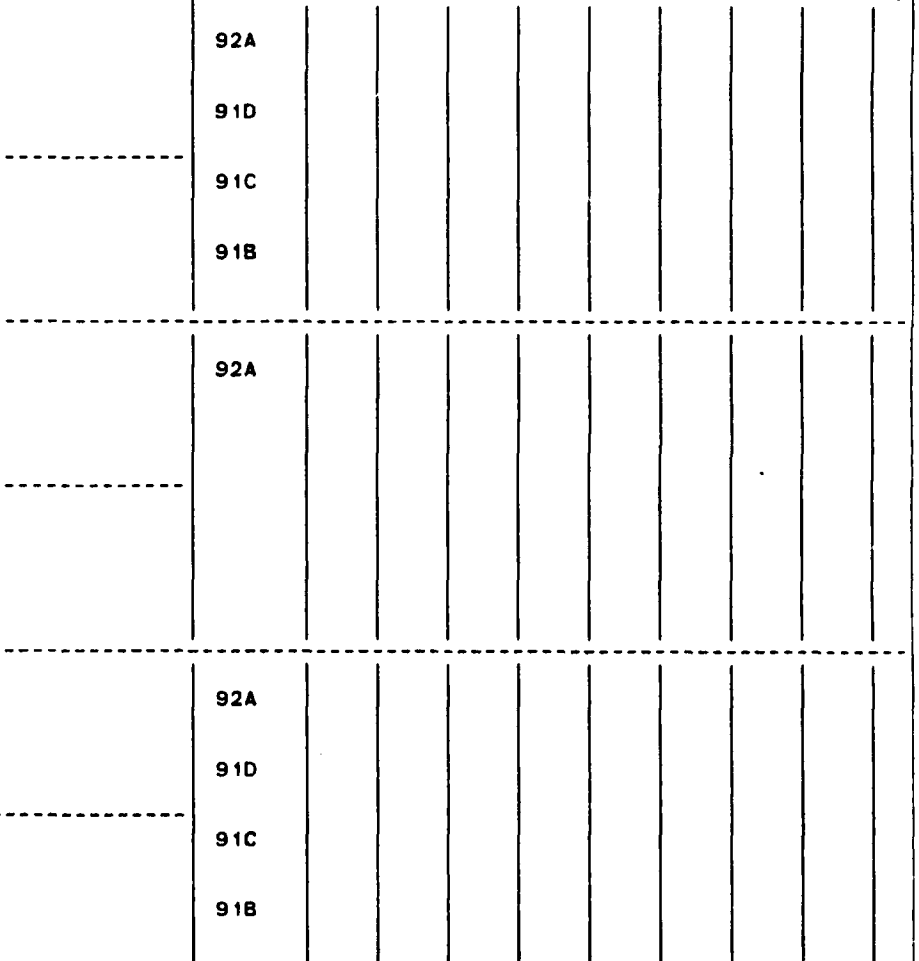
CONSTITUENT / UNIT OF MEASURE / YOUR REPORTED METHOD / COMPARATIVE METHOD	SPECIMEN	YOUR RESULT	EVAL CODE	MEAN	SD	NO. LABS	SDI	LIMITS OF ACCEPTABILITY LOWER	LIMITS OF ACCEPTABILITY UPPER	QTR
T UPTAKE UPTAKE UNITS TEST NOT PERFORMED	C-01 C-02 C-03 C-04 C-05									92A 91D
NO COMPARATIVE METHOD	C-01 C-02 C-03 C-04 C-05									91C 91B
THYROID STIM. HORMONE UU/ML TEST NOT PERFORMED	C-01 C-02 C-03 C-04 C-05									92A
ALL REAGENT MANUF	C-01 C-02 C-03 C-04 C-05			1.72 13.29 1.87 14.41 1.81	.22 1.80 .23 1.99 .22	1899 1908 1897 1908 1895				
THYROXINE MCG/DL TEST NOT PERFORMED	C-01 C-02 C-03 C-04 C-05									92A 91D
ALL REAGENT MANUF	C-01 C-02 C-03 C-04 C-05			15.92 6.72 16.51 7.11 16.22	2.10 .74 2.14 .80 2.19	3099 3099 3073 3095 3072				91C 91B

PLOTS OF THE RELATIVE DISTANCE OF YOUR RESULTS FROM TARGETS AS PERCENTAGES OF ALLOWED DEVIATION
-100=LOWER LIMIT 0=TARGET +100=UPPER LIMIT



SURVEY SET: C3 - A
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CONSTITUENT / UNIT OF MEASURE / YOUR REPORTED METHOD / COMPARATIVE METHOD	SPEC-IMEN	YOUR RESULT	EVAL CODE	MEAN	SD	NO. LABS	SDI	LIMITS OF ACCEPTABILITY LOWER	UPPER	QTR	PLOTS (-100=LOWER LIMIT, 0=TARGET, +100=UPPER LIMIT)
TRANSFERRIN	C-01										
MG/DL	C-02									92A	
TEST NOT PERFORMED										91D	
NO COMPARATIVE METHOD	C-01									91C	
	C-02									91B	
UREA - SERUM	C-01			26.3	.8	257	+0.9				
MG N/DL	C-02			51.7	1.4	257	+0.2			92A	1-1---11---1
UREASE WITH GLDH	C-03			28.6	.8	255	+0.5				
BECKMAN SYNCHRON CX4/5	C-04			56.1	1.5	253	-0.1				
	C-05			27.5	.9	258	+0.6			91D	1--1--3
UREASE WITH GLDH	C-01	27	14	25.5	1.3	3886	+1.2	23 -	28	91C	1-1----1--1-1
ALL AUTO CHEM INSTR	C-02	52	14	51.3	2.3	3974	+0.3	46 -	56		
	C-03	29	14	27.9	1.4	3975	+0.8	25 -	31		
	C-04	56	14	55.8	2.6	3969	+0.1	50 -	61	91B	1-2----11
	C-05	28	14	26.8	1.4	3997	+0.9	24 -	30		
URIC ACID	C-01			6.13	.14	338	-0.2				
MG/DL	C-02			8.26	.18	336	-0.3			92A	1-12-1
URICASE	C-03			6.64	.15	338	-0.3				
BECKMAN SYNCHRON CX4/5	C-04			8.92	.20	337	-0.6				
	C-05			6.40	.14	339	-0.7			91D	1121
URICASE	C-01	6.1	14	6.12	.30	5518	-0.1	5.0 -	7.2	91C	1-21-1
ALL INSTRUMENTS	C-02	8.2	14	8.45	.45	5642	-0.6	7.0 -	9.9		
	C-03	6.6	14	6.69	.33	5509	-0.3	5.5 -	7.9		
	C-04	8.8	14	9.17	.51	5641	-0.7	7.6 -	10.8	91B	1-12-1
	C-05	6.3	14	6.43	.32	5509	-0.4	5.3 -	7.6		

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800/323-4040

1992

CHEMISTRY-SERIES 3

EVALUATION

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CAP NUMBER: 38988-01-01-01 KIT# 01
ATTENTION:
INSTITUTION: PENNINGTON BIOMEDICAL RSCH CTR

KIT MAILED: 3/16/92
QUEST. EVAL: 5/16/92

COPIES SENT TO: LOUISIANA

CONSTITUENT / UNIT OF MEASURE / YOUR REPORTED METHOD / COMPARATIVE METHOD	SPECIMEN	YOUR RESULT	EVAL CODE	MEAN	SD	NO. LABS	SDI	LIMITS OF ACCEPTABILITY LOWER	UPPER	PLOTS OF THE RELATIVE DISTANCE OF YOUR RESULTS FROM TARGETS AS PERCENTAGES OF ALLOWED DEVIATION (-100=LOWER LIMIT, 0=TARGET, +100=UPPER LIMIT) QTR	PLOT
ACID PHOSPHATASE IU/L TEST NOT PERFORMED NOT GIVEN	C-01 C-02									92A	
NO COMPARATIVE METHOD	C-01 C-02										
ALT SGPT IU/L BECKMAN SYNCHRON CX4/5 BECKMAN/37 C	C-01 C-02 C-03 C-04 C-05	65 123 70 137 67	13 13 13 13 13	63.3 124.0 69.5 136.2 66.5	3.5 4.0 3.5 4.2 3.6	329 332 331 331 332	+0.5 -0.3 +0.1 +0.2 +0.1	50 - 76 99 - 149 55 - 84 109 - 164 53 - 80		92A 91D	1-3-1 131
NO COMPARATIVE METHOD	C-01 C-02 C-03 C-04 C-05									91C 91B	1121 13---1
ALKALINE PHOSPHATASE IU/L BECKMAN SYNCHRON CX4/5 BECKMAN/37 C	C-01 C-02 C-03 C-04 C-05	46 162 50 176 48	13 13 13 13 13	48.6 171.8 52.7 185.9 50.9	2.9 7.2 2.7 7.9 2.8	341 344 341 342 343	-0.9 -1.4 -1.0 -1.3 -1.0	39 - 58 150 - 194 44 - 61 162 - 210 42 - 60		92A 91D	11111 1-111-1
NO COMPARATIVE METHOD	C-01 C-02 C-03 C-04 C-05									91C 91B	2-12 1-31

1 9 9 2

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AMYLASE-SERUM IU/L BECKMAN SYNCHRON CX4/5 BECKMAN/37 C	C-01	138	13	136.9	4.4	321	+0.3	123 -	151		
	C-02	334	13	332.4	9.3	321	+0.2	304 -	361	92A	2-12
	C-03	149	13	149.6	4.4	322	-0.1	136 -	163		
	C-04	365	13	362.2	10.9	322	+0.3	329 -	395		
	C-05	143	13	143.4	4.8	323	-0.1	129 -	158	91D	1112
NO COMPARATIVE METHOD	C-01									91C	1121
	C-02										
	C-03										
	C-04									91B	212
	C-05										
AST SGOT IU/L BECKMAN SYNCHRON CX4/5 BECKMAN/37 C	C-01	59	13	57.7	2.8	349	+0.5	46 -	70		
	C-02	143	13	142.6	5.0	351	+0.1	114 -	172	92A	2111
	C-03	63	13	62.2	2.9	351	+0.3	49 -	75		
	C-04	155	13	154.3	5.3	348	+0.1	123 -	186		
	C-05	62	13	60.2	2.7	348	+0.7	48 -	73	91D	111-11
NO COMPARATIVE METHOD	C-01									91C	1112
	C-02										
	C-03										
	C-04									91B	12--11
	C-05										
CREATINE KINASE IU/L BECKMAN SYNCHRON CX4/5 BECKMAN/45 C	C-01	251	10			1					
	C-02	515	10			1				92A	
	C-03	270	10			1					
	C-04	554	10			1					
	C-05	249	10			1				91D METHOD CHANGE	
NO COMPARATIVE METHOD	C-01									91C	1-31
	C-02										
	C-03										
	C-04									91B	1-2-2
	C-05										

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CHEMISTRY-SERIES 3

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GAMMA GLUTAMYL TRANS IU/L BECKMAN SYNCHRON CX4/5 BECKMAN/37 C	C-01	61	10	60.4	2.4	269	+0.3			92A
	C-02	184	10	182.7	6.9	272	+0.2			
NO COMPARATIVE METHOD	C-01									91D
	C-02									91C
										91B
LACTATE DEHYDROGENASE IU/L BECKMAN SYNCHRON CX4/5 BECKMAN/37 C	C-01	144	13	140.2	5.7	330	+0.7	112 -	169	92A
	C-02	323	13	328.7	10.5	330	-0.5	263 -	395	
	C-03	148	13	148.1	5.9	331	+0.0	118 -	178	
	C-04	346	13	354.8	11.9	330	-0.7	283 -	426	
	C-05	143	13	143.4	6.3	329	-0.1	114 -	173	91D
NO COMPARATIVE METHOD	C-01									91C
	C-02									
	C-03									
	C-04									91B
	C-05									
LIPASE IU/L BECKMAN SYNCHRON CX4/5 BMD/37 C	C-01	264	10			9				92A
	C-02	847	10			9				
NO COMPARATIVE METHOD	C-01									
	C-02									

PLOTS OF THE RELATIVE DISTANCE OF YOUR RESULTS FROM TARGETS AS PERCENTAGES OF ALLOWED DEVIATION
-100=LOWER LIMIT 0=TARGET +100=UPPER LIMIT

QTR -100 -75 -50 -25 0 25 50 75 100

92A 2-2--1

91D 212

91C 31-1

91B 121--1

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1992

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APOLIPOPROTEIN A1 MG/DL TEST NOT PERFORMED	LP-01 LP-02									92A	
NO COMPARATIVE METHOD	LP-01 LP-02										
APOLIPOPROTEIN B MG/DL TEST NOT PERFORMED	LP-01 LP-02									92A	
NO COMPARATIVE METHOD	LP-01 LP-02										
CHOLESTEROL L MG/DL ENZYMATIC BECKMAN SYNCHRON CX4/5	LP-01	234	13	237.0	7.0	334	-0.4	213 -	261	92A	
	LP-02	201	13	196.9	5.5	336	+0.7	177 -	217		111------1
	LP-03					330					
	LP-04	244	13	249.0	7.4	332	-0.7	224 -	274		
	LP-05	168	13	172.1	5.0	333	-0.8	154 -	190		
ENZYMATIC ALL MULTICON ANALYZERS	LP-01			245.8	15.5	5018	-0.8				
	LP-02			206.6	13.7	5023	-0.4				
	LP-03			193.6	12.3	5024					
	LP-04			260.6	18.5	5014	-0.9				
	LP-05			180.0	11.5	5001	-1.0				

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1992

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HDL CHOLESTEROL (L) MG/DL DEX SUL 50,000MW /MG BECKMAN SYNCHRON CX4/5	LP-01	27	10			7				
	LP-02	18	10			7				92A
	LP-03					6				
	LP-04	30	10			7				
	LP-05	24	10			7				
NO COMPARATIVE METHOD	LP-01									
	LP-02									
	LP-03									
	LP-04									
	LP-05									
TRIGLYCERIDE (L) MG/DL ENZ-COLOR W/OGB W/OSB BECKMAN SYNCHRON CX4/5	LP-01	168	13	177.2	10.8	226	-0.9	144 -	210	
	LP-02	145	13	144.7	8.9	228	+0.0	118 -	172	92A
	LP-03					228				
	LP-04	171	13	178.8	9.9	228	-0.8	149 -	209	
	LP-05	120	13	123.2	8.7	228	-0.4	97 -	150	
NO COMPARATIVE METHOD	LP-01									
	LP-02									
	LP-03									
	LP-04									
	LP-05									
LDL CHOLESTEROL MG/DL TRIGLYCERIDE /5	LP-01	173	10	187.7	14.4	2855	-1.0			
	LP-02	154	10	152.6	23.6	2872	+0.1			92A
NO COMPARATIVE METHOD	LP-01									
	LP-02									

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BILIRUBIN, TOTAL MG/DL DIAZO J-G W/O BLANK BECKMAN SYNCHRON CX4/5	C-92	7.1	10	6.99	.25	272	+0.4			92A
										91D
ALL METHOD PRINCIPLES ALL INSTRUMENTS	C-92			6.70	.68	5215	+0.6			91C
										91B
AMMONIA UMOL/L TEST NOT PERFORMED NOT GIVEN	C-96									92A
										91D
NO COMPARATIVE METHOD	C-96									91C
										91B

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ATTENTION:
INSTITUTION: PENNINGTON BIOMEDICAL RSCH CTR

DATE: 5/16/92

SUMMARY OF YOUR PERFORMANCE OVER THE LAST THREE QUARTERS FOR ANALYTES REGULATED UNDER THE 03-14-90 UNIFORM PT GUIDELINES OF CLIA'67

REGULATED ANALYTE	QUESTIONNAIRE ID: TEST EVENT	CAP #	KIT	TOTAL SAMPLES	SUMMARY OF YOUR RESPONSES: TOTAL	ACCEPTABLE	PERFORMANCE SCORES BY YEAR-QUARTER: 91-3	91-4	92-1	CURRENT QUARTER PERFORMANCE INTERPRETATION	CUMULATIVE PERFORMANCE INTERPRETATION
ALT	C3-92A	38988-01-01-01	01	5	5	5			100	SATISFACTORY	SUCCESSFUL
ALBUMIN	C3-92A	38988-01-01-01	01	5	5	5			100	SATISFACTORY	SUCCESSFUL
ALKALINE PHOSPHATASE	C3-92A	38988-01-01-01	01	5	5	5			100	SATISFACTORY	SUCCESSFUL
AMYLASE	C3-92A	38988-01-01-01	01	5	5	5			100	SATISFACTORY	SUCCESSFUL
AST	C3-92A	38988-01-01-01	01	5	5	5			100	SATISFACTORY	SUCCESSFUL
BILIRUBIN, TOTAL	C3-92A	38988-01-01-01	01	5	5	5			100	SATISFACTORY	SUCCESSFUL
CALCIUM, TOTAL	C3-92A	38988-01-01-01	01	5	5	5			100	SATISFACTORY	SUCCESSFUL
CHLORIDE	C3-92A	38988-01-01-01	01	5	5	5			100	SATISFACTORY	SUCCESSFUL
CHOLESTEROL, TOTAL	C3-92A	38988-01-01-01	01	5	4	4			100	SATISFACTORY	SUCCESSFUL
CHOLESTEROL, HDL	C3-92A	38988-01-01-01	01	5	5	5			100	SATISFACTORY	SUCCESSFUL
CREATINE KINASE (CK)	C3-92A	38988-01-01-01	01	10	10	10			100	SATISFACTORY	SUCCESSFUL
CK ISOENZYMES (QUANT)	C3-92A	38988-01-01-01	01	10	0				TNP	NOT PERFORMED	NOT APPLICABLE
CREATININE	C3-92A	38988-01-01-01	01	5	5	5			100	SATISFACTORY	SUCCESSFUL
GLUCOSE	C3-92A	38988-01-01-01	01	5	5	5			100	SATISFACTORY	SUCCESSFUL
IRON, TOTAL	C3-92A	38988-01-01-01	01	5	5	5			100	SATISFACTORY	SUCCESSFUL
LDH	C3-92A	38988-01-01-01	01	10	10	10			100	SATISFACTORY	SUCCESSFUL
LDH ISOENZYMES (QUANT	C3-92A	38988-01-01-01	01	5	0				TNP	NOT PERFORMED	NOT APPLICABLE
MAGNESIUM	C3-92A	38988-01-01-01	01	5	5	5			100	SATISFACTORY	SUCCESSFUL
POTASSIUM	C3-92A	38988-01-01-01	01	5	5	5			100	SATISFACTORY	SUCCESSFUL
SODIUM	C3-92A	38988-01-01-01	01	5	5	5			100	SATISFACTORY	SUCCESSFUL
TOTAL PROTEIN	C3-92A	38988-01-01-01	01	5	5	5			100	SATISFACTORY	SUCCESSFUL
TRIGLYCERIDES	C3-92A	38988-01-01-01	01	5	4	4			100	SATISFACTORY	SUCCESSFUL
UREA NITROGEN	C3-92A	38988-01-01-01	01	5	5	5			100	SATISFACTORY	SUCCESSFUL
URIC ACID	C3-92A	38988-01-01-01	01	5	5	5			100	SATISFACTORY	SUCCESSFUL
SUMMARY TOTALS FOR ROUTINE CHEMISTRY				135	118	118			100	SATISFACTORY	SUCCESSFUL

SURVEY SET: FH6 - C
CAP NUMBER: 88988-01-01-01 KIT# 01
ATTENTION:
INSTITUTION: PENNINGTON BIOMEDICAL RSCH CTR

COMP.HEMATOLOGY - FH6

E V A L U A T I O N

KIT MAILED: 8/26/91
QUEST. EVAL: 10/29/91

CONSTITUENT / UNIT OF MEASURE / YOUR REPORTED METHOD / COMPARATIVE METHOD	SPECIMEN	YOUR RESULT	EVAL CODE	MEAN	SD	NO. LABS	SDI	LIMITS OF ACCEPTABILITY LOWER	UPPER	QTR	PLOTS OF THE RELATIVE DISTANCE OF YOUR RESULTS FROM TARGETS AS PERCENTAGES OF ALLOWED DEVIATION (-100=LOWER LIMIT, 0=TARGET, +100=UPPER LIMIT)
WHITE BLOOD CELL COUNT / THOUSAND/UL / COULTER STKS	FH611	3.5	13	3.31	.12	518	+1.6	2.9 -	3.7	91C	
	FH612	7.2	13	7.23	.16	517	-0.2	6.7 -	7.8		
	FH613	12.6	13	12.68	.28	529	-0.3	11.8 -	13.6		
	FH614	12.8	13	12.70	.28	522	+0.4	11.8 -	13.6	91B	
	FH615	25.1	13	24.77	.50	523	+0.7	23.2 -	26.3		
NO COMPARATIVE METHOD	FH611										
	FH612										
	FH613										
	FH614										
	FH615										
RED CELL COUNT (FH) / MILLION/UL / COULTER STKS	FH611	6.06	13	6.018	.076	529	+0.6	5.79 -	6.25	91C	
	FH612	5.24	13	5.211	.068	530	+0.4	5.00 -	5.42		
	FH613	5.23	13	5.182	.064	530	+0.8	4.99 -	5.38		
	FH614	2.58	13	2.534	.034	527	+1.4	2.43 -	2.64	91B	
	FH615	3.05	13	3.018	.039	527	+0.8	2.90 -	3.14		
NO COMPARATIVE METHOD	FH611										
	FH612										
	FH613										
	FH614										
	FH615										
HEMOGLOBIN / G/DL / COULTER STKS	FH611	18.1	13	18.11	.18	526	-0.1	17.5 -	18.7	91C	
	FH612	15.6	13	15.68	.16	530	-0.5	15.2 -	16.2		
	FH613	14.3	13	14.35	.14	529	-0.4	13.9 -	14.8		
	FH614	8.6	13	8.55	.12	531	+0.4	8.1 -	9.0	91B	
	FH615	9.4	13	9.34	.12	530	+0.5	8.9 -	9.7		
ALL INSTRUMENTS	FH611			18.11	.21	750	+0.0				
	FH612			15.71	.17	747	-0.6				
	FH613			14.36	.15	749	-0.4				
	FH614			8.52	.13	753	+0.6				
	FH615			9.31	.13	750	+0.7				

CAP NUMBER: 38988-01-01-01 KIT# 01

COMP.HEMATOLOGY - FH6

E V A L U A T I O N

CONSTITUENT / UNIT OF MEASURE / YOUR REPORTED METHOD / COMPARATIVE METHOD	SPECIMEN	YOUR RESULT	EVAL CODE	MEAN	SD	NO. LABS	SDI	LIMITS OF ACCEPTABILITY LOWER	UPPER	PLOTS OF THE RELATIVE DISTANCE OF YOUR RESULTS FROM TARGETS AS PERCENTAGES OF ALLOWED DEVIATION -100=LOWER LIMIT 0=TARGET +100=UPPER LIMIT QTR
HEMATOCRIT PERCENT COULTER STKS	FH611	53.9	13	52.57	.80	532	+1.7	50.1 -	55.0	91C
	FH612	46.4	13	45.38	.68	531	+1.5	43.5 -	47.5	
	FH613	43.7	13	42.41	.63	532	+2.0	40.5 -	44.3	
	FH614	25.3	13	24.44	.39	530	+2.2	23.2 -	25.7	91B
	FH615	27.4	13	26.49	.42	530	+2.2	25.2 -	27.8	
NO COMPARATIVE METHOD	FH611									
	FH612									
	FH613									
	FH614									
	FH615									
MCV FEMTOLITERS COULTER STKS	FH611	88.9	10	87.28	.74	530	+2.2			91C
	FH612	88.6	10	87.03	.87	531	+1.8			
	FH613	83.4	10	81.79	.73	530	+2.2			
	FH614	97.9	10	96.31	1.12	531	+1.4			91B
	FH615	89.1	10	87.70	.80	530	+1.8			
NO COMPARATIVE METHOD	FH611									
	FH612									
	FH613									
	FH614									
	FH615									
MCH PICOGRAMS COULTER STKS	FH611	29.9	10	30.07	.40	529	-0.4			91C
	FH612	29.9	10	30.08	.40	527	-0.5			
	FH613	27.5	10	27.69	.37	529	-0.5			
	FH614	33.2	10	33.72	.49	526	-1.1			91B
	FH615	30.6	10	30.93	.46	526	-0.7			
NO COMPARATIVE METHOD	FH611									
	FH612									
	FH613									
	FH614									
	FH615									

CAP NUMBER: 38988-01-01-01 KIT# 01

COMP.HEMATOLOGY - FH6

E V A L U A T I O N

CONSTITUENT / UNIT OF MEASURE / YOUR REPORTED METHOD / COMPARATIVE METHOD	SPECIMEN	YOUR RESULT	EVAL CODE	MEAN	SD	NO. LABS	SDI	LIMITS OF ACCEPTABILITY LOWER	UPPER	QTR	PLOTS OF THE RELATIVE DISTANCE OF YOUR RESULTS FROM TARGETS AS PERCENTAGES OF ALLOWED DEVIATION -100=LOWER LIMIT 0=TARGET +100=UPPER LIMIT
MCHO G/DL COULTER STKS	FH611	33.7	10	34.43	.53	533	-1.4			91C	
	FH612	33.6	10	34.56	.53	531	-1.8				
	FH613	32.9	10	33.84	.51	531	-1.8				
	FH614	33.8	10	34.96	.58	532	-2.0			91B	
	FH615	34.4	10	35.24	.61	532	-1.4				
NO COMPARATIVE METHOD	FH611										
	FH612										
	FH613										
	FH614										
	FH615										
RDW/RCMI COULTER STKS	FH611	14.6	10	14.67	.21	523	-0.3			91C	
	FH612	13.9	10	13.94	.20	524	-0.2				
	FH613	14.7	10	14.50	.22	526	+0.9				
	FH614	14.0	10	13.77	.18	523	+1.3			91B	
	FH615	14.3	10	13.93	.19	525	+1.9				
NO COMPARATIVE METHOD	FH611										
	FH612										
	FH613										
	FH614										
	FH615										
PLT CT-WHOLE BLOOD THOUSAND/UL COULTER STKS	FH611	610	13	614.7	20.2	533	-0.2	554 -	676	91D	121---1
	FH612	462	13	469.2	16.2	530	-0.4	420 -	518		
	FH613	97	13	95.4	3.6	522	+0.4	84 -	107		
	FH614	466	13	469.3	15.1	529	-0.2	424 -	515	91B	1-2-1--1
	FH615	513	13	517.8	16.3	530	-0.3	468 -	567		
NO COMPARATIVE METHOD	FH611										
	FH612										
	FH613										
	FH614										
	FH615										

CAP NUMBER: 38988-01-01-01 KIT# 01

COMP.HEMATOLOGY - FH6

E V A L U A T I O N

CONSTITUENT / UNIT OF MEASURE / YOUR REPORTED METHOD / COMPARATIVE METHOD	SPECIMEN	YOUR RESULT	EVAL CODE	MEAN	SD	NO. LABS	SDI	LIMITS OF ACCEPTABILITY LOWER	UPPER	PLOTS OF THE RELATIVE DISTANCE OF YOUR RESULTS FROM TARGETS AS PERCENTAGES OF ALLOWED DEVIATION -100=LOWER LIMIT 0=TARGET +100=UPPER LIMIT QTR
NEUT/GRAN PERCENT COULTER STKS	FH611	63	10	59		470		51	74	91C
	FH612	61	10	59		489		53	66	
	FH613	59	10	59		500		55	66	
	FH614	74	10	73		501		64	79	91B
	FH615	75	10	74		504		66	81	
NO COMPARATIVE METHOD	FH611									
	FH612									
	FH613									
	FH614									
	FH615									
LYMPHOCYTES PERCENT COULTER STKS	FH611	27	10	31		474		19	38	91C
	FH612	32	10	32		501		26	37	
	FH613	33	10	32		512		27	36	
	FH614	25	10	24		509		20	29	91B
	FH615	23	10	23		511		19	28	
NO COMPARATIVE METHOD	FH611									
	FH612									
	FH613									
	FH614									
	FH615									
MONOCYTES PERCENT COULTER STKS	FH611	5	10	6		481		0	11	91C
	FH612	6	10	6		499		2	11	
	FH613	6	10	6		511		2	11	
	FH614	1	10	2		501		1	6	91B
	FH615	2	10	2		505		1	6	
NO COMPARATIVE METHOD	FH611									
	FH612									
	FH613									
	FH614									
	FH615									

CAP NUMBER: 38988-01-01-01 KIT# 01

COMP.HEMATOLOGY - FH6

E V A L U A T I O N

CONSTITUENT / UNIT OF MEASURE / YOUR REPORTED METHOD / COMPARATIVE METHOD	SPECIMEN	YOUR RESULT	EVAL CODE	MEAN	SD	NO. LABS	SDI	LIMITS OF ACCEPTABILITY LOWER	UPPER	PLOTS OF THE RELATIVE DISTANCE OF YOUR RESULTS FROM TARGETS AS PERCENTAGES OF ALLOWED DEVIATION -100=LOWER LIMIT 0=TARGET +100=UPPER LIMIT QTR -100 -75 -50 -25 0 25 50 75 100
EOSINOPHILS PERCENT COULTER STKS	FH611	4	10	3		477		0	5	91C
	FH612	1	10	1		501		0	4	
	FH613	1	10	1		516		0	2	
	FH614	0	10	0		487		0	1	91B
	FH615	0	10	0		494		0	1	
NO COMPARATIVE METHOD	FH611									
	FH612									
	FH613									
	FH614									
	FH615									
BASOPHILS PERCENT COULTER STKS	FH611	1	10	1		478		0	3	91C
	FH612	0	10	1		492		0	2	
	FH613	1	10	1		508		0	2	
	FH614	0	10	0		495		0	1	91B
	FH615	0	10	0		496		0	1	
NO COMPARATIVE METHOD	FH611									
	FH612									
	FH613									
	FH614									
	FH615									
WHITE CELL 2ND INST THOUSAND/UL 2ND INST NOT REPORTED	FH611									91C
	FH612									METHOD
	FH613									CHANGE
	FH614									91B
	FH615									
NO COMPARATIVE METHOD	FH611									
	FH612									
	FH613									
	FH614									
	FH615									

CAP NUMBER: 38988-01-01-01 KIT# 01

COMP.HEMATOLOGY - FH6

E V A L U A T I O N

CONSTITUENT / UNIT OF MEASURE / YOUR REPORTED METHOD / COMPARATIVE METHOD	EVALUATION AND COMPARATIVE-METHOD STATISTICS: SPECIMEN	YOUR RESULT	EVAL CODE	MEAN	SD	NO. LABS	SDI	LIMITS OF ACCEPTABILITY LOWER	LIMITS OF ACCEPTABILITY UPPER	PLOTS OF THE RELATIVE DISTANCE OF YOUR RESULTS FROM TARGETS AS PERCENTAGES OF ALLOWED DEVIATION (-100=LOWER LIMIT, 0=TARGET, +100=UPPER LIMIT): QTR	-100 -75 -50 -25 0 25 50 75 100
BASOPHILS (2ND INST) PERCENT 2ND INST NOT REPORTED	FH611					1				91C METHOD CHANGE 91B	
	FH612					1					
	FH613					1					
	FH614					1					
	FH615					1					
NO COMPARATIVE METHOD	FH611										
	FH612										
	FH613										
	FH614										
	FH615										
RETICULOCYTE COUNT PERCENT TEST NOT PERFORMED	HE-48									91C 91B	
ALL METHOD PRINCIPLES	HE-48			4.98	1.38	388					

CONSTITUENT METHODS	SPEC.	**** YOUR RESULT ****	CODE	GOOD PERFORMANCE	ACCEPTABLE PERFORMANCE
BLOOD CELL IDENT	HE-38	BURR CELL (ECHINOCYTE)	71	BURR CELL (ECHINOCYTE) CRENATED RED CELL	
	HE-39	* MALARIA, EXTRACELLULAR	71	PROTOZOAN NON-MAL,EXTR	
	HE-40	STAIN PRECIPITATE	71	STAIN PRECIPITATE	

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COMP.HEMATOLOGY - FH6

E V A L U A T I O N

CAP NUMBER: 38988-01-01-01 KIT# 01

CONSTITUENT METHODS	SPEC.	**** YOUR RESULT ****	CODE	GOOD PERFORMANCE	ACCEPTABLE PERFORMANCE
BLOOD CELL IDENT	HE-41	OVALOCYTE	71	OVALOCYTE	
	HE-42	LYMPHOCYTE	71	LYMPHOCYTE REACTIVE LYMPHODYIE	PROLYMPHOCYTE
	HE-43	BAND/STAB/NEUTROPHIL	10	SEE SUMMARY REPORT	SEE SUMMARY REPORT
	HE-44	POLYCHROMATOPHILIC BON	10	SEE SUMMARY REPORT	SEE SUMMARY REPORT
	HE-45	MYELOCYTE	10	SEE SUMMARY REPORT	SEE SUMMARY REPORT
	HE-46	MONOCYTE, IMMATURE PRO	10	SEE SUMMARY REPORT	SEE SUMMARY REPORT
	HE-47	ERYTHRO.,MACROCYT,RND	10	SEE SUMMARY REPORT	SEE SUMMARY REPORT

* NOT ACCEPTABLE

YOUR NEXT SURVEY KIT, SET FH6-D, IS SCHEDULED TO BE SHIPPED ON NOVEMBER 26, 1991.

PENNINGTON BIOMEDICAL RSCH CTR
CLINICAL RESEARCH LABORATORY
6400 PERKINS RD.
BATON ROUGE LA 70808

CHECKED BY ....Kevin Murrell..... DATE REVIEWED ...11/7/91

THE COLLEGE OF AMERICAN PATHOLOGISTS RECOMMENDS THAT THE RESULTS OF THE PROFICIENCY TESTING CRITERION FOR JUDGING THE ACCEPTABILITY OF ANY INDIVIDUAL TEST OR ANALYTE

College of American Pathologists
325 Waukegan Road Northfield Illinois 60093-2750
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COMP.HEMATOLOGY - FH6

E V A L U A T I O N

SURVEY SET: FH6 - D
CAP NUMBER: 38988-01-01-01 KIT# 01
ATTENTION:
INSTITUTION: PENNINGTON BIOMEDICAL RSCH CTR

KIT MAILED: 11/25/91
QUEST. EVAL: 1/28/92

PENNINGTON BIOMEDICAL RSCH CTR
CLINICAL RESEARCH LABORATORY
6400 PERKINS RD.
BATON ROUGE LA 70808

College of American Pathologists
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1991

COMP.HEMATOLOGY - FH6

EVALUATION

SURVEY SET: FH6 - D
CAP NUMBER: 38988-01-01-01 KIT# 01
ATTENTION:
INSTITUTION: PENNINGTON BIOMEDICAL RSCH CTR

KIT MAILED: 11/25/91
QUEST. EVAL: 1/28/92

CONSTITUENT / UNIT OF MEASURE / YOUR REPORTED METHOD / COMPARATIVE METHOD	SPECIMEN	YOUR RESULT	EVAL CODE	MEAN	SD	NO. LABS	SDI	LIMITS OF ACCEPTABILITY LOWER	LIMITS OF ACCEPTABILITY UPPER	QTR	PLOTS OF THE RELATIVE DISTANCE OF YOUR RESULTS FROM TARGETS AS PERCENTAGES OF ALLOWED DEVIATION (-100=LOWER LIMIT, 0=TARGET, +100=UPPER LIMIT)
WHITE BLOOD CELL COUNT / THOUSAND/UL / COULTER STKS	FH616	25.0	13	25.23	.69	478	-0.3	23.1	27.3	91D	
	FH617	6.1	13	6.11	.17	475	-0.1	5.6	6.7		
	FH618	11.9	13	12.31	.28	476	-1.5	11.4	13.2		
	FH619	18.6	13	18.91	.42	476	-0.7	17.6	20.2	91C	
	FH620	25.8	13	26.17	.59	475	-0.6	24.4	28.0		
NO COMPARATIVE METHOD	FH616									91B	
	FH617										
	FH618										
	FH619										
	FH620										
RED CELL COUNT (FH) / MILLION/UL / COULTER STKS	FH616	5.98	13	5.914	.077	479	+0.9	5.68	6.15	91D	
	FH617	4.68	13	4.629	.055	477	+0.9	4.46	4.80		
	FH618	3.72	13	3.684	.046	476	+0.8	3.54	3.83		
	FH619	2.48	13	2.459	.031	479	+0.7	2.36	2.56	91C	
	FH620	3.04	13	2.994	.039	478	+1.2	2.87	3.12		
NO COMPARATIVE METHOD	FH616									91B	
	FH617										
	FH618										
	FH619										
	FH620										
HEMOGLOBIN / G/DL / COULTER STKS	FH616	18.7	13	18.86	.23	476	-0.7	18.1	19.6	91D	
	FH617	13.9	13	13.84	.16	477	+0.4	13.3	14.4		
	FH618	11.1	13	11.07	.13	478	+0.2	10.6	11.5		
	FH619	7.0	13	7.00	.10	478	+0.0	6.7	7.3	91C	
	FH620	9.1	13	9.13	.12	477	-0.3	8.7	9.5		
ALL INSTRUMENTS	FH616			18.88	.24	651	-0.8			91B	
	FH617			13.83	.15	652	+0.5				
	FH618			11.03	.14	653	+0.5				
	FH619			6.97	.11	653	+0.3				
	FH620			9.10	.13	653	+0.0				

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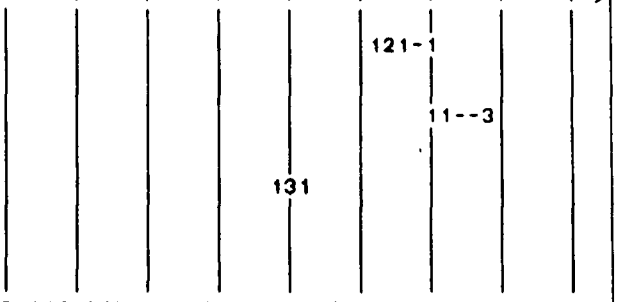
COMP.HEMATOLOGY - FH6

E V A L U A T I O N

SURVEY SET: FH6 - D
CAP NUMBER: 38988-01-01-01 KIT# 01

CONSTITUENT / UNIT OF MEASURE / YOUR REPORTED METHOD / COMPARATIVE METHOD	SPECIMEN	YOUR RESULT	EVAL CODE	MEAN	SD	NO. LABS	SDI	LIMITS OF ACCEPTABILITY LOWER	UPPER	QTR	PLOTS OF THE RELATIVE DISTANCE OF YOUR RESULTS FROM TARGETS AS PERCENTAGES OF ALLOWED DEVIATION (-100=LOWER LIMIT, 0=TARGET, +100=UPPER LIMIT)
HEMATOCRIT	FH616	56.5	13	55.62	.81	476	+1.1	53.1 -	58.1	91D	
PERCENT	FH617	40.9	13	40.26	.55	478	+1.2	38.6 -	42.0		
COULTER STKS	FH618	32.5	13	32.10	.45	478	+0.9	30.7 -	33.5		
	FH619	20.8	13	20.44	.30	477	+1.2	19.5 -	21.4	91C	
	FH620	26.8	13	26.23	.38	478	+1.5	25.0 -	27.4		
NO COMPARATIVE METHOD	FH616									91B	
	FH617										
	FH618										
	FH619										
	FH620										
MCV	FH616	94.4	10	93.98	.81	476	+0.5			91D	
FEMTOLITERS	FH617	87.2	10	86.92	.69	477	+0.4				
COULTER STKS	FH618	87.4	10	87.09	.71	475	+0.4				
	FH619	83.5	10	83.04	.72	476	+0.6			91C	
	FH620	88.0	10	87.55	.77	478	+0.6				
NO COMPARATIVE METHOD	FH616									91B	
	FH617										
	FH618										
	FH619										
	FH620										
MCH	FH616	31.3	10	31.89	.43	473	-1.4			91D	
PICOGRAMS	FH617	29.6	10	29.91	.39	475	-0.8				
COULTER STKS	FH618	29.8	10	30.05	.39	472	-0.6				
	FH619	28.2	10	28.46	.44	475	-0.6			91C	
	FH620	29.9	10	30.51	.45	475	-1.4				
NO COMPARATIVE METHOD	FH616									91B	
	FH617										
	FH618										
	FH619										
	FH620										



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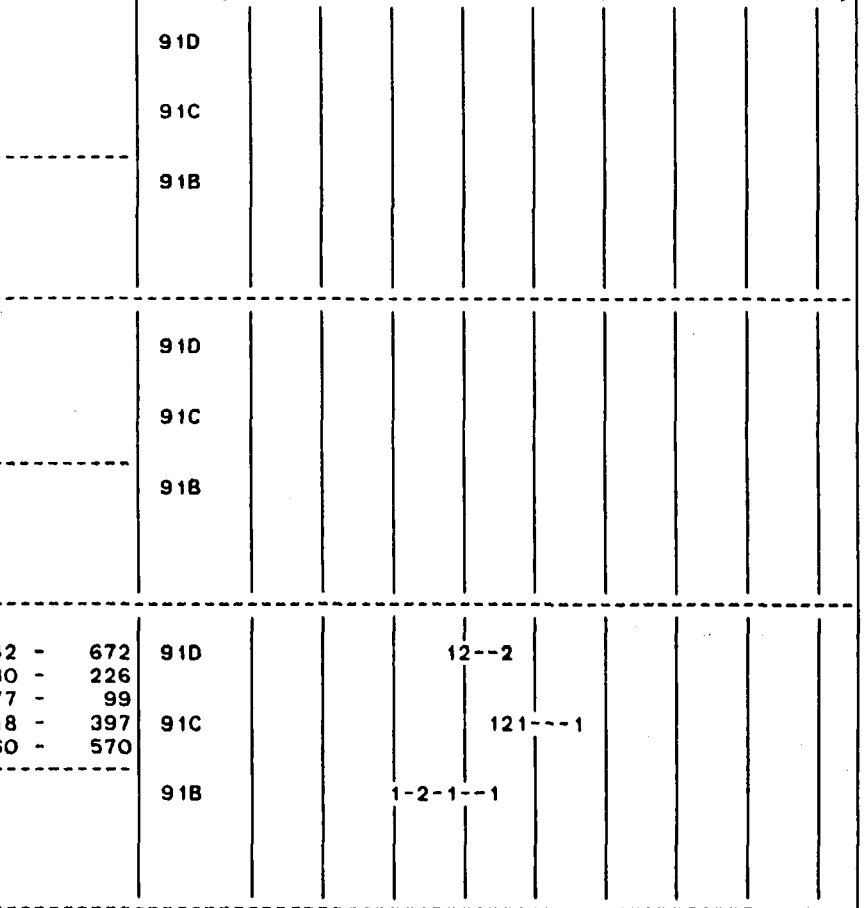
COMP.HEMATOLOGY - FH6

E V A L U A T I O N

SURVEY SET: FH6 - 0
CAP NUMBER: 38388-01-01-01 KIT# 01

CONSTITUENT / UNIT OF MEASURE / YOUR REPORTED METHOD / COMPARATIVE METHOD	SPECIMEN	YOUR RESULT	EVAL CODE	MEAN	SD	NO. LABS	SDI	LIMITS OF ACCEPTABILITY LOWER	UPPER	QTR
MCHC	FH616	33.2	10	33.90	.53	477	-1.3			91D
G/DL	FH617	33.9	10	34.38	.49	474	-1.0			
COULTER STKS	FH618	34.0	10	34.48	.50	476	-1.0			
	FH619	33.6	10	34.25	.59	478	-1.1			91C
	FH620	34.1	10	34.81	.56	475	-1.3			
NO COMPARATIVE METHOD	FH616									91B
	FH617									
	FH618									
	FH619									
	FH620									
RDW/RCMI	FH616	13.6	10	13.08	.19	474	+2.7			91D
	FH617	13.9	10	13.74	.19	474	+0.8			
COULTER STKS	FH618	13.9	10	13.72	.18	469	+1.0			
	FH619	15.4	10	14.99	.24	472	+1.7			91C
	FH620	15.0	10	14.69	.22	474	+1.4			
NO COMPARATIVE METHOD	FH616									91B
	FH617									
	FH618									
	FH619									
	FH620									
PLT CT-WHOLE BLOOD	FH616	600	13	606.9	21.4	474	-0.3	542 -	672	91D
THOUSAND/UL	FH617	198	13	203.4	7.5	475	-0.7	180 -	226	
COULTER STKS	FH618	85	13	87.8	3.5	477	-0.8	77 -	99	
	FH619	345	13	357.4	13.1	476	-0.9	318 -	397	91C
	FH620	509	13	515.1	18.1	475	-0.3	460 -	570	
NO COMPARATIVE METHOD	FH616									91B
	FH617									
	FH618									
	FH619									
	FH620									

PLOTS OF THE RELATIVE DISTANCE OF YOUR RESULTS FROM TARGETS AS PERCENTAGES OF ALLOWED DEVIATION
-100=LOWER LIMIT 0=TARGET +100=UPPER LIMIT



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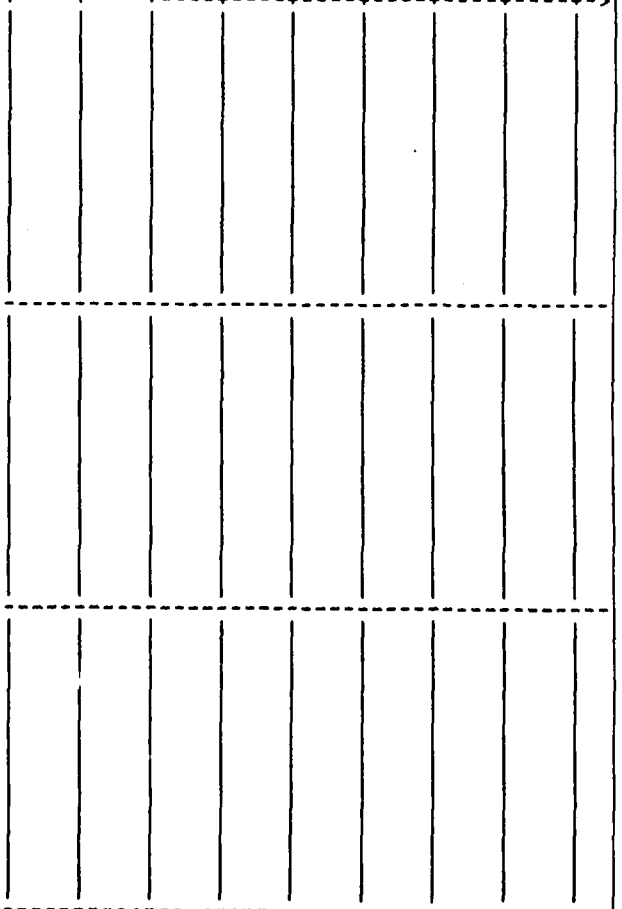
SURVEY SET: FH6 - D
CAP NUMBER: 38988-01-01-01 KIT# 01

COMP.HEMATOLOGY - FH6

E V A L U A T I O N

CONSTITUENT / UNIT OF MEASURE / YOUR REPORTED METHOD / COMPARATIVE METHOD	SPECIMEN	YOUR RESULT	EVAL CODE	MEAN	SD	NO. LABS	SDI	LIMITS OF ACCEPTABILITY LOWER	UPPER	PLOTS OF THE RELATIVE DISTANCE OF YOUR RESULTS FROM TARGETS AS PERCENTAGES OF ALLOWED DEVIATION (-100=LOWER LIMIT, 0=TARGET, +100=UPPER LIMIT) QTR
NEUT/GRAN	FH616	59	10			464				91D
PERCENT	FH617	56	10			465				
COULTER STKS	FH618	58	10			460				
	FH619	60	10			456				91C
	FH620	60	10			458				
NO COMPARATIVE METHOD	FH616									91B
	FH617									
	FH618									
	FH619									
	FH620									
LYMPHOCYTES	FH616	29	10			472				91D
PERCENT	FH617	29	10			469				
COULTER STKS	FH618	26	10			469				
	FH619	21	10			468				91C
	FH620	28	10			472				
NO COMPARATIVE METHOD	FH616									91B
	FH617									
	FH618									
	FH619									
	FH620									
MONOCYTES	FH616	10	10			468				91D
PERCENT	FH617	13	10			471				
COULTER STKS	FH618	10	10			471				
	FH619	8	10			471				91C
	FH620	10	10			469				
NO COMPARATIVE METHOD	FH616									91B
	FH617									
	FH618									
	FH619									
	FH620									



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SURVEY SET: FH6 - D
CAP NUMBER: 38988-01-01-01 KIT# 01

COMP.HEMATOLOGY - FH6

EVALUATION

CONSTITUENT / UNIT OF MEASURE / YOUR REPORTED METHOD / COMPARATIVE METHOD	SPECIMEN	YOUR RESULT	EVAL CODE	MEAN	SD	NO. LABS	SDI	LIMITS OF ACCEPTABILITY LOWER	LIMITS OF ACCEPTABILITY UPPER	PLOTS OF THE RELATIVE DISTANCE OF YOUR RESULTS FROM TARGETS AS PERCENTAGES OF ALLOWED DEVIATION (-100=LOWER LIMIT, 0=TARGET, +100=UPPER LIMIT) QTR
EOSINOPHILS / PERCENT / COULTER STKS	FH616	1	10			422				91D
	FH617	1	10			425				
	FH618	5	10			469				
	FH619	11	10			466				91C
	FH620	1	10			433				
NO COMPARATIVE METHOD	FH616									91B
	FH617									
	FH618									
	FH619									
	FH620									
BASOPHILS / PERCENT / COULTER STKS	FH616	1	10			456				91D
	FH617	1	10			468				
	FH618	1	10			456				
	FH619	0	10			462				91C
	FH620	1	10			459				
NO COMPARATIVE METHOD	FH616									91B
	FH617									
	FH618									
	FH619									
	FH620									
WHITE CELL 2ND INST / THOUSAND/UL / 2ND INST NOT REPORTED	FH616									91D
	FH617									
	FH618									
	FH619									91C
	FH620									
NO COMPARATIVE METHOD	FH616									91B
	FH617									
	FH618									
	FH619									
	FH620									

QTR -100 -75 -50 -25 0 25 50 75 100

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E V A L U A T I O N

SURVEY SET: FH6 - 0
CAP NUMBER: 38988-01-01-01 KIT# 01

CONSTITUENT / UNIT OF MEASURE / YOUR REPORTED METHOD / COMPARATIVE METHOD	SPECIMEN	YOUR RESULT	EVAL CODE	MEAN	SD	NO. LABS	SDI	LIMITS OF ACCEPTABILITY LOWER	LIMITS OF ACCEPTABILITY UPPER	QTR	PLOTS OF THE RELATIVE DISTANCE OF YOUR RESULTS FROM TARGETS AS PERCENTAGES OF ALLOWED DEVIATION (-100=LOWER LIMIT, 0=TARGET, +100=UPPER LIMIT)
RED CELL CNT 2NDIN FH / MILLION/UL / 2ND INST NOT REPORTED	FH616									91D	
	FH617										
	FH618										
	FH619									91C	
	FH620										
NO COMPARATIVE METHOD	FH616									91B	
	FH617										
	FH618										
	FH619										
	FH620										
HEMOGLOBIN 2ND INST. / G/DL / 2ND INST NOT REPORTED	FH616									91D	
	FH617										
	FH618										
	FH619									91C	
	FH620										
ALL INSTRUMENTS	FH616			18.88	.24	651				91B	
	FH617			13.83	.15	652					
	FH618			11.03	.14	653					
	FH619			6.97	.11	653					
	FH620			9.10	.13	653					
HEMATOCRIT 2ND INST. / PERCENT / 2ND INST NOT REPORTED	FH616									91D	
	FH617										
	FH618										
	FH619									91C	
	FH620										
NO COMPARATIVE METHOD	FH616									91B	
	FH617										
	FH618										
	FH619										
	FH620										

QTR -100 -75 -50 -25 0 25 50 75 100

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CAP NUMBER: 38988-01-01-01 KIT# 01

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E V A L U A T I O N

CONSTITUENT / UNIT OF MEASURE / YOUR REPORTED METHOD / COMPARATIVE METHOD	EVALUATION AND COMPARATIVE-METHOD STATISTICS: SPECIMEN	YOUR RESULT	EVAL CODE	MEAN	SD	NO. LABS	SDI	LIMITS OF ACCEPTABILITY LOWER	UPPER	PLOTS OF THE RELATIVE DISTANCE OF YOUR RESULTS FROM TARGETS AS PERCENTAGES OF ALLOWED DEVIATION (-100=LOWER LIMIT, 0=TARGET, +100=UPPER LIMIT): QTR
MCV 2ND INSTRUMENT / FEMTOLITERS / 2ND INST NOT REPORTED	FH616									91D
	FH617									
	FH618									
	FH619									91C
	FH620									
NO COMPARATIVE METHOD	FH616									91B
	FH617									
	FH618									
	FH619									
	FH620									
MCH 2ND INSTRUMENT / PICOGRAMS / 2ND INST NOT REPORTED	FH616									91D
	FH617									
	FH618									
	FH619									91C
	FH620									
NO COMPARATIVE METHOD	FH616									91B
	FH617									
	FH618									
	FH619									
	FH620									
MCHC 2ND INSTRUMENT / G/DL / 2ND INST NOT REPORTED	FH616									91D
	FH617									
	FH618									
	FH619									91C
	FH620									
NO COMPARATIVE METHOD	FH616									91B
	FH617									
	FH618									
	FH619									
	FH620									

QTR -100 -75 -50 -25 0 25 50 75 100

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E V A L U A T I O N

CONSTITUENT / UNIT OF MEASURE / YOUR REPORTED METHOD / COMPARATIVE METHOD	SPECIMEN	YOUR RESULT	EVAL CODE	MEAN	SD	NO. LABS	SDI	LIMITS OF ACCEPTABILITY LOWER	LIMITS OF ACCEPTABILITY UPPER	QTR	PLOTS OF THE RELATIVE DISTANCE OF YOUR RESULTS FROM TARGETS AS PERCENTAGES OF ALLOWED DEVIATION (-100=LOWER LIMIT, 0=TARGET, +100=UPPER LIMIT)
RDW/RCMI 2ND INST.	FH616									91D	
	FH617										
2ND INST NOT REPORTED	FH618										
	FH619									91C	
	FH620										
NO COMPARATIVE METHOD	FH616									91B	
	FH617										
	FH618										
	FH619										
	FH620										
PLATELET COUNT (2ND) THOUSAND/UL	FH616									91D	
	FH617										
2ND INST NOT REPORTED	FH618										
	FH619									91C	
	FH620										
NO COMPARATIVE METHOD	FH616									91B	
	FH617										
	FH618										
	FH619										
	FH620										
NEUT/GRAN (2ND INST) PERCENT	FH616									91D	
	FH617										
2ND INST NOT REPORTED	FH618										
	FH619									91C	
	FH620										
NO COMPARATIVE METHOD	FH616									91B	
	FH617										
	FH618										
	FH619										
	FH620										

QTR -100 -75 -50 -25 0 25 50 75 100

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E V A L U A T I O N

CONSTITUENT / UNIT OF MEASURE / YOUR REPORTED METHOD / COMPARATIVE METHOD	SPECIMEN	YOUR RESULT	EVAL CODE	MEAN	SD	NO. LABS	SDI	LIMITS OF ACCEPTABILITY LOWER	LIMITS OF ACCEPTABILITY UPPER	QTR	PLOTS OF THE RELATIVE DISTANCE OF YOUR RESULTS FROM TARGETS AS PERCENTAGES OF ALLOWED DEVIATION (-100=LOWER LIMIT, 0=TARGET, +100=UPPER LIMIT)
LYMPHOCYTES (2ND INST) / PERCENT / 2ND INST NOT REPORTED	FH616									91D	
	FH617										
	FH618										
	FH619									91C	
	FH620										
NO COMPARATIVE METHOD	FH616									91B	
	FH617										
	FH618										
	FH619										
	FH620										
MONOCYTES (2ND INST) / PERCENT / 2ND INST NOT REPORTED	FH616									91D	
	FH617										
	FH618										
	FH619									91C	
	FH620										
NO COMPARATIVE METHOD	FH616									91B	
	FH617										
	FH618										
	FH619										
	FH620										
EOSINOPHILS (2ND INST) / PERCENT / 2ND INST NOT REPORTED	FH616									91D	
	FH617										
	FH618										
	FH619									91C	
	FH620										
NO COMPARATIVE METHOD	FH616									91B	
	FH617										
	FH618										
	FH619										
	FH620										

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E V A L U A T I O N

SURVEY SET: FH6 - D
CAP NUMBER: 38988-01-01-01 KIT# 01

CONSTITUENT / UNIT OF MEASURE / YOUR REPORTED METHOD / COMPARATIVE METHOD	SPECIMEN	YOUR RESULT	EVAL CODE	MEAN	SD	NO. LABS	SDI	LIMITS OF ACCEPTABILITY LOWER	LIMITS OF ACCEPTABILITY UPPER	PLOTS OF THE RELATIVE DISTANCE OF YOUR RESULTS FROM TARGETS AS PERCENTAGES OF ALLOWED DEVIATION (-100=LOWER LIMIT, 0=TARGET, +100=UPPER LIMIT) QTR
BASOPHILS (2ND INST) / PERCENT / 2ND INST NOT REPORTED	FH616 FH617 FH618 FH619 FH620									91D 91C
NO COMPARATIVE METHOD	FH616 FH617 FH618 FH619 FH620									91B
RETICULOCYTE COUNT / PERCENT / TEST NOT PERFORMED	HE-64									91D 91C
ALL METHOD PRINCIPLES	HE-64			1.34	.43	369				91B

CONSTITUENT METHODS	SPEC.	**** YOUR RESULT ****	CODE	GOOD PERFORMANCE	ACCEPTABLE PERFORMANCE
BLOOD CELL IDENT	HE-54	LYMPHOCYTE	71	LYMPHOCYTE	LYMPHOCYTE REACTIVE
	HE-55	* SEGMENTED NEUTROPHIL	71	METAMYELOCYTE	BAND/STAB/NEUTROPHIL GIANT BAND NEUTROPHL GIANT METAMYELOCYTE
	HE-56	MONOCYTE		MONOCYTE	MONOCYTE, IMMATURE PRO

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SURVEY SET: FH6 - D
CAP NUMBER: 38988-01-01-01 KIT# 01

CONSTITUENT METHODS	SPEC.	**** YOUR RESULT ****	CODE	GOOD PERFORMANCE	ACCEPTABLE PERFORMANCE
BLOOD CELL IDENT	HE-57	BAND/STAB/NEUTROPHIL	71	BAND/STAB/NEUTROPHIL	SEGMENTED NEUTROPHIL
	HE-58	MYELOCYTE	71	MYELOCYTE	METAMYELOCYTE GIANT METAMYELOCYTE
	HE-59	BASOPHIL, MATURE	10	SEE SUMMARY REPORT	SEE SUMMARY REPORT
	HE-60	PLATELET GIANT MACROTH	10	SEE SUMMARY REPORT	SEE SUMMARY REPORT
	HE-61	POLYCHROMATOPHILIC BON	10	SEE SUMMARY REPORT	SEE SUMMARY REPORT
	HE-62	MEGAKARYOCYTE/PRECURSR	10	SEE SUMMARY REPORT	SEE SUMMARY REPORT
	HE-63	EPITHELIAL/ENDOTHELIAL	10	SEE SUMMARY REPORT	SEE SUMMARY REPORT

* NOT ACCEPTABLE

IF YOU HAVE SUBMITTED YOUR 1992 ORDER, YOUR NEXT COMPREHENSIVE HEMATOLOGY-FLOW THROUGH DIFFERENTIAL SURVEY KIT, SET FH6-A, IS SCHEDULED TO BE SHIPPED ON FEBRUARY 25, 1992.

PENNINGTON BIOMEDICAL RSCH CTR
CLINICAL RESEARCH LABORATORY
6400 PERKINS RD.
BATON ROUGE LA 70808

CHECKED BY Kevin Munson DATE REVIEWED 2/17/92

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COMP.HEMATOLOGY - FH6

E V A L U A T I O N

SURVEY SET: FH6 - A
CAP NUMBER: 38988-01-01-01 KIT# 01
ATTENTION:
INSTITUTION: PENNINGTON BIOMEDICAL RSCH CTR

KIT MAILED: 2/25/92
QUEST. EVAL: 4/19/92

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PENNINGTON BIOMEDICAL RSCH CTR
CLINICAL RESEARCH LABORATORY
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BATON ROUGE LA 70808

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COMP.HEMATOLOGY - FH6

E V A L U A T I O N

SURVEY SET: FH6 - A
CAP NUMBER: 38988-01-01-01 KIT# 01
ATTENTION:
INSTITUTION: PENNINGTON BIOMEDICAL RSCH CTR

KIT MAILED: 2/25/92
QUEST. EVAL: 4/19/92

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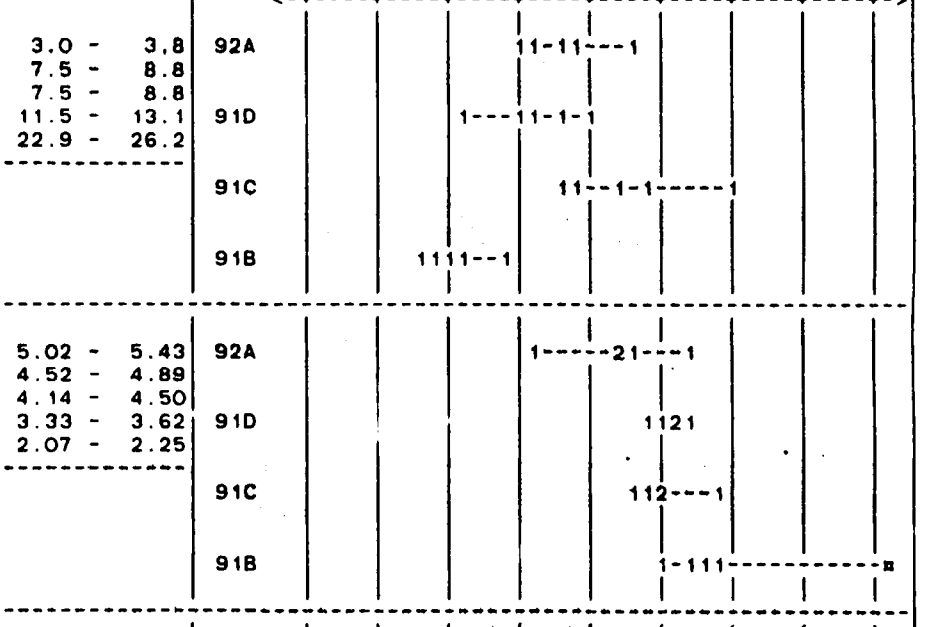
CONSTITUENT / UNIT OF MEASURE / YOUR REPORTED METHOD / COMPARATIVE METHOD	SPECIMEN	YOUR RESULT	EVAL CODE	MEAN	SD	NO. LABS	SDI	LIMITS OF ACCEPTABILITY LOWER	UPPER	QTR	PLOTS OF THE RELATIVE DISTANCE OF YOUR RESULTS FROM TARGETS AS PERCENTAGES OF ALLOWED DEVIATION (-100=LOWER LIMIT, 0=TARGET, +100=UPPER LIMIT)
WHITE BLOOD CELL COUNT	FH601	3.5	13	3.44	.12	751	+0.5	3.0 -	3.8	92A	
THOUSAND/UL	FH602	8.1	13	8.14	.20	754	-0.2	7.5 -	8.8		
COULTER STKS	FH603	8.1	13	8.16	.20	747	-0.3	7.5 -	8.8		
	FH604	12.1	13	12.29	.26	750	-0.7	11.5 -	13.1	91D	
	FH605	24.2	13	24.56	.53	747	-0.7	22.9 -	26.2		
NO COMPARATIVE METHOD	FH601									91C	
	FH602										
	FH603										
	FH604									91B	
	FH605										
RED CELL COUNT (FH)	FH601	5.18	13	5.224	.068	754	-0.6	5.02 -	5.43	92A	
MILLION/UL	FH602	4.73	13	4.703	.060	752	+0.5	4.52 -	4.89		
COULTER STKS	FH603	4.34	13	4.323	.058	751	+0.3	4.14 -	4.50		
	FH604	3.53	13	3.479	.047	755	+1.1	3.33 -	3.62	91D	
	FH605	2.17	13	2.163	.029	751	+0.2	2.07 -	2.25		
NO COMPARATIVE METHOD	FH601									91C	
	FH602										
	FH603										
	FH604									91B	
	FH605										
HEMOGLOBIN	FH601	15.1	13	15.17	.17	752	-0.4	14.6 -	15.7	92A	
G/DL	FH602	13.6	13	13.66	.15	748	-0.4	13.2 -	14.2		
COULTER STKS	FH603	12.6	13	12.59	.14	749	+0.1	12.1 -	13.1		
	FH604	10.2	13	10.23	.12	747	-0.3	9.8 -	10.6	91D	
	FH605	6.6	13	6.58	.13	754	+0.2	6.1 -	7.0		
ALL INSTRUMENTS	FH601			15.19	.18	1084	-0.5			91C	
	FH602			13.65	.16	1085	-0.3				
	FH603			12.56	.16	1088	+0.3				
	FH604			10.19	.14	1092	+0.1			91B	
	FH605			6.56	.14	1098	+0.3				



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SURVEY SET: FH6 - A
CAP NUMBER: 38988-01-01-01 KIT# 01

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E V A L U A T I O N

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CONSTITUENT / UNIT OF MEASURE / YOUR REPORTED METHOD / COMPARATIVE METHOD	SPECIMEN	YOUR RESULT	EVAL CODE	MEAN	SD	NO. LABS	SDI	LIMITS OF ACCEPTABILITY LOWER	UPPER	QTR	PLOTS OF THE RELATIVE DISTANCE OF YOUR RESULTS FROM TARGETS AS PERCENTAGES OF ALLOWED DEVIATION (-100=LOWER LIMIT, 0=TARGET, +100=UPPER LIMIT)
HEMATOCRIT / PERCENT / COULTER STKS	FH601	43.0	13	43.82	.68	755	-1.2	41.7 -	45.9	92A	
	FH602	39.1	13	39.12	.59	751	+0.0	37.3 -	40.9		
	FH603	35.7	13	35.77	.55	749	-0.1	34.1 -	37.5		
	FH604	28.8	13	28.60	.45	754	+0.4	27.2 -	30.0	91D	
	FH605	17.9	13	17.95	.30	755	-0.2	17.0 -	18.9		
NO COMPARATIVE METHOD	FH601									91C	
	FH602										
	FH603										
	FH604									91B	
	FH605										
MCV / FEMTOLITERS / COULTER STKS	FH601	83.0	10	83.81	.65	751	-1.2			92A	
	FH602	82.7	10	83.13	.64	752	-0.7				
	FH603	82.7	10	82.69	.63	750	+0.0				
	FH604	81.6	10	82.14	.62	751	-0.9			91D	
	FH605	82.4	10	82.97	.70	752	-0.8				
NO COMPARATIVE METHOD	FH601									91C	
	FH602										
	FH603										
	FH604									91B	
	FH605										
RDW/RCMI / COULTER STKS	FH601	16.3	10	15.97	.25	741	+1.3			92A	
	FH602	16.2	10	16.20	.26	745	+0.0				
	FH603	16.2	10	16.15	.25	746	+0.2				
	FH604	16.2	10	16.19	.25	743	+0.0			91D	
	FH605	17.4	10	17.63	.27	746	-0.9				
NO COMPARATIVE METHOD	FH601									91C	
	FH602										
	FH603										
	FH604									91B	
	FH605										

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E V A L U A T I O N

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CONSTITUENT / UNIT OF MEASURE / YOUR REPORTED METHOD / COMPARATIVE METHOD	SPECIMEN	YOUR RESULT	EVAL CODE	MEAN	SD	NO. LABS	SDI	LIMITS OF ACCEPTABILITY LOWER	UPPER	QTR	PLOTS OF THE RELATIVE DISTANCE OF YOUR RESULTS FROM TARGETS AS PERCENTAGES OF ALLOWED DEVIATION (-100=LOWER LIMIT, 0=TARGET, +100=UPPER LIMIT)
PLT CT-WHOLE BLOOD	FH601	484	13	503.6	17.3	750	-1.1	451 -	556	92A	
THOUSAND/UL	FH602	89	13	87.7	3.5	754	+0.4	77 -	99		
COULTER STKS	FH603	74	13	76.2	3.1	750	-0.7	66 -	86		
	FH604	285	13	286.9	10.4	748	-0.2	255 -	319	91D	
	FH605	495	13	494.5	17.2	752	+0.0	442 -	547		
NO COMPARATIVE METHOD	FH601									91C	
	FH602										
	FH603										
	FH604									91B	
	FH605										
NEUT/GRAN	FH601	56	10	57.8	3.4	726	-0.5			92A	
PERCENT	FH602	51	10	51.0	2.1	731	+0.0				
COULTER STKS	FH603	57	10	57.1	2.1	733	+0.0				
	FH604	71	10	72.7	2.2	730	-0.8			91D	
	FH605	78	10	78.6	3.8	727	-0.2				
NO COMPARATIVE METHOD	FH601									91C	
	FH602										
	FH603										
	FH604									91B	
	FH605										
LYMPHOCYTES	FH601	37	10	35.8	3.6	732	+0.3			92A	
PERCENT	FH602	42	10	42.7	2.1	729	-0.3				
COULTER STKS	FH603	36	10	36.8	2.0	733	-0.4				
	FH604	22	10	21.7	2.2	739	+0.1			91D	
	FH605	13	10	15.5	4.2	730	-0.6				
NO COMPARATIVE METHOD	FH601									91C	
	FH602										
	FH603										
	FH604									91B	
	FH605										

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CAP NUMBER: 38988-01-01-01 KIT# 01

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E V A L U A T I O N

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CONSTITUENT / UNIT OF MEASURE / YOUR REPORTED METHOD / COMPARATIVE METHOD	SPECIMEN	YOUR RESULT	EVAL CODE	MEAN	SD	ND. LABS	SDI	LIMITS OF ACCEPTABILITY LOWER	UPPER	PLOTS OF THE RELATIVE DISTANCE OF YOUR RESULTS FROM TARGETS AS PERCENTAGES OF ALLOWED DEVIATION (-100=LOWER LIMIT, 0=TARGET, +100=UPPER LIMIT) QTR
MONOCYTES	FH601	2	10	1.7	.7	718	+0.4			92A
PERCENT	FH602	4	10	2.9	.9	725	+1.2			
COULTER STKS	FH603	3	10	2.4	.9	739	+0 7.			
	FH604	2	10	1.2	.4	727	+2 0			91D
	FH605	3	10	1.6	.6	733	+2.3			
NO COMPARATIVE METHOD	FH601									91C
	FH602									
	FH603									
	FH604									91B
	FH605									
EOSINOPHILS	FH601	5	10	4.6	1.8	731	+0.2			92A
PERCENT	FH602	3	10	3.4	1.2	736	-0.3			
COULTER STKS	FH603	4	10	3.5	1.3	738	+0.4			
	FH604	5	10	4.3	1.8	731	+0.4			91D
	FH605	5	10	3.9	1.6	726	+0.7			
NO COMPARATIVE METHOD	FH601									91C
	FH602									
	FH603									
	FH604									91B
	FH605									
BASOPHILS	FH601	0	10			667				92A
PERCENT	FH602	0	10			669				
COULTER STKS	FH603	0	10		.1	667	+0.0			
	FH604	0	10			679				91D
	FH605	1	10	.1	.3	684	+3.0			
NO COMPARATIVE METHOD	FH601									91C
	FH602									
	FH603									
	FH604									91B
	FH605									

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COMP.HEMATOLOGY - FH6

E V A L U A T I O N

SURVEY SET: FH6 - A
CAP NUMBER: 38988-01-01-01 KIT# 01

COPIES SENT TO: LOUISIANA

CONSTITUENT / UNIT OF MEASURE / YOUR REPORTED METHOD / COMPARATIVE METHOD	SPECIMEN	YOUR RESULT	EVAL CODE	MEAN	SD	NO. LABS	SDI	LIMITS OF ACCEPTABILITY LOWER	LIMITS OF ACCEPTABILITY UPPER	PLOTS OF THE RELATIVE DISTANCE OF YOUR RESULTS FROM TARGETS AS PERCENTAGES OF ALLOWED DEVIATION (-100=LOWER LIMIT, 0=TARGET, +100=UPPER LIMIT) QTR
WHITE CELL 2ND INST THOUSAND/UL 2ND INST NOT REPORTED	FH601									92A
	FH602									
	FH603									
	FH604									91D
	FH605									
NO COMPARATIVE METHOD	FH601									91C
	FH602									
	FH603									
	FH604									91B
	FH605									
RED CELL CNT 2NDIN FH MILLION/UL 2ND INST NOT REPORTED	FH601									92A
	FH602									
	FH603									
	FH604									91D
	FH605									
NO COMPARATIVE METHOD	FH601									91C
	FH602									
	FH603									
	FH604									91B
	FH605									
HEMOGLOBIN 2ND INST. G/DL 2ND INST NOT REPORTED	FH601									92A
	FH602									
	FH603									
	FH604									91D
	FH605									
ALL INSTRUMENTS	FH601			15.19	.18	1084				91C
	FH602			13.65	.16	1085				
	FH603			12.56	.16	1088				
	FH604			10.19	.14	1092				91B
	FH605			6.56	.14	1098				

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COMP.HEMATOLOGY - FH6

E V A L U A T I O N

SURVEY SET: FH6 - A
CAP NUMBER: 38988-01-01-01 KIT# 01

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CONSTITUENT / UNIT OF MEASURE / YOUR REPORTED METHOD / COMPARATIVE METHOD	SPECIMEN	YOUR RESULT	EVAL CODE	MEAN	SD	NO. LABS	SDI	LIMITS OF ACCEPTABILITY LOWER	LIMITS OF ACCEPTABILITY UPPER	QTR	PLOTS OF THE RELATIVE DISTANCE OF YOUR RESULTS FROM TARGETS AS PERCENTAGES OF ALLOWED DEVIATION (-100=LOWER LIMIT, 0=TARGET, +100=UPPER LIMIT) -100 -75 -50 -25 0 25 50 75 100
HEMATOCRIT 2ND INST. PERCENT / 2ND INST NOT REPORTED	FH601									92A	
	FH602										
	FH603										
	FH604									91D	
	FH605										
NO COMPARATIVE METHOD	FH601									91C	
	FH602										
	FH603										
	FH604									91B	
	FH605										
MCV 2ND INSTRUMENT FEMTOLITERS / 2ND INST NOT REPORTED	FH601									92A	
	FH602										
	FH603										
	FH604									91D	
	FH605										
NO COMPARATIVE METHOD	FH601									91C	
	FH602										
	FH603										
	FH604									91B	
	FH605										
RDW/RCMI 2ND INST. / 2ND INST NOT REPORTED	FH601									92A	
	FH602										
	FH603										
	FH604									91D	
	FH605										
NO COMPARATIVE METHOD	FH601									91C	
	FH602										
	FH603										
	FH604									91B	
	FH605										

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E V A L U A T I O N

SURVEY SET: FH6 - A
CAP NUMBER: 38988-01-01-01 KIT# 01

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CONSTITUENT / UNIT OF MEASURE / YOUR REPORTED METHOD / COMPARATIVE METHOD	SPECIMEN	YOUR RESULT	EVAL CODE	MEAN	SD	NO. LABS	SDI	LIMITS OF ACCEPTABILITY LOWER	LIMITS OF ACCEPTABILITY UPPER	QTR	PLOTS OF THE RELATIVE DISTANCE OF YOUR RESULTS FROM TARGETS AS PERCENTAGES OF ALLOWED DEVIATION (-100=LOWER LIMIT, 0=TARGET, +100=UPPER LIMIT) -100 -75 -50 -25 0 25 50 75 100
PLATELET COUNT (2ND) / THOUSAND/UL / 2ND INST NOT REPORTED	FH601									92A	
	FH602										
	FH603										
	FH604									91D	
	FH605										
NO COMPARATIVE METHOD	FH601									91C	
	FH602										
	FH603										
	FH604									91B	
	FH605										
NEUT/GRAN (2ND INST) / PERCENT / 2ND INST NOT REPORTED	FH601									92A	
	FH602										
	FH603										
	FH604									91D	
	FH605										
NO COMPARATIVE METHOD	FH601									91C	
	FH602										
	FH603										
	FH604									91B	
	FH605										
LYMPHOCYTES (2ND INST) / PERCENT / 2ND INST NOT REPORTED	FH601									92A	
	FH602										
	FH603										
	FH604									91D	
	FH605										
NO COMPARATIVE METHOD	FH601									91C	
	FH602										
	FH603										
	FH604									91B	
	FH605										

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SURVEY SET: FH6 - A
CAP NUMBER: 38988-01-01-01 KIT# 01

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CONSTITUENT / UNIT OF MEASURE / YOUR REPORTED METHOD / COMPARATIVE METHOD	SPECIMEN	YOUR RESULT	EVAL CODE	MEAN	SD	NO. LABS	SDI	LIMITS OF ACCEPTABILITY LOWER	UPPER	QTR	PLOTS OF THE RELATIVE DISTANCE OF YOUR RESULTS FROM TARGETS AS PERCENTAGES OF ALLOWED DEVIATION (-100=LOWER LIMIT, 0=TARGET, +100=UPPER LIMIT)
MONOCYTES (2ND INST) / PERCENT / 2ND INST NOT REPORTED	FH601									92A	
	FH602										
	FH603										
	FH604									91D	
	FH605										
NO COMPARATIVE METHOD	FH601									91C	
	FH602										
	FH603										
	FH604									91B	
	FH605										
EOSINOPHILS (2ND INST) / PERCENT / 2ND INST NOT REPORTED	FH601									92A	
	FH602										
	FH603										
	FH604									91D	
	FH605										
NO COMPARATIVE METHOD	FH601									91C	
	FH602										
	FH603										
	FH604									91B	
	FH605										
BASOPHILS (2ND INST) / PERCENT / 2ND INST NOT REPORTED	FH601									92A	
	FH602										
	FH603										
	FH604									91D	
	FH605										
NO COMPARATIVE METHOD	FH601									91C	
	FH602										
	FH603										
	FH604									91B	
	FH605										

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E V A L U A T I O N

SURVEY SET: FH6 - A
CAP NUMBER: 38988-01-01-01 KIT# 01

CONSTITUENT METHODS	SPEC.	**** YOUR RESULT ****	CODE	GOOD PERFORMANCE	ACCEPTABLE PERFORMANCE
BLOOD CELL IDENT	HE-06	MYELOCYTE	72	SEE SUMMARY REPORT	SEE SUMMARY REPORT
	HE-07	SPHEROCYTE	71	SPHEROCYTE	
	HE-08	FRAGMENTED CELL	71	FRAGMENTED CELL	
	HE-09	MONOCYTE	71	MONOCYTE	MONOCYTE, IMMATURE PRO
	HE-10	POLYCHROMATOPHILIC RC	71	POLYCHROMATOPHILIC RC	
	HE-11	TEST NOT PERF. IN LAB.	10	SEE SUMMARY REPORT	SEE SUMMARY REPORT
	HE-12	TEST NOT PERF. IN LAB.	10	SEE SUMMARY REPORT	SEE SUMMARY REPORT
	HE-13	TEST NOT PERF. IN LAB.	10	SEE SUMMARY REPORT	SEE SUMMARY REPORT
	HE-14	TEST NOT PERF. IN LAB.	10	SEE SUMMARY REPORT	SEE SUMMARY REPORT
	HE-15	TEST NOT PERF. IN LAB.	10	SEE SUMMARY REPORT	SEE SUMMARY REPORT

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E V A L U A T I O N

SURVEY SET: FH6 - A
CAP NUMBER: 38988-01-01-01 KIT# 01

DATE: 4/19/92

SUMMARY OF YOUR PERFORMANCE OVER THE LAST THREE QUARTERS FOR ANALYTES REGULATED UNDER THE 03-14-90 UNIFORM PT GUIDELINES OF CLIA'67

REGULATED ANALYTE	QUESTIONNAIRE ID: TEST EVENT	QUESTIONNAIRE ID: CAP #	QUESTIONNAIRE ID: KIT	TOTAL SAMPLES	SUMMARY OF YOUR RESPONSES: TOTAL	SUMMARY OF YOUR RESPONSES: ACCEPTABLE	PERFORMANCE SCORES BY YEAR-QUARTER: 91-3	91-4	92-1	CURRENT QUARTER PERFORMANCE INTERPRETATION	CUMULATIVE PERFORMANCE INTERPRETATION
CELL IDENTIFICATION	FH6-92A	38988-01-01-01	01	5	5	5			100	SATISFACTORY	SUCCESSFUL
ERYTHROCYTE COUNT	FH6-92A	38988-01-01-01	01	5	5	5			100	SATISFACTORY	SUCCESSFUL
HEMATOCRIT	FH6-92A	38988-01-01-01	01	5	5	5			100	SATISFACTORY	SUCCESSFUL
HEMOGLOBIN	FH6-92A	38988-01-01-01	01	5	5	5			100	SATISFACTORY	SUCCESSFUL
LEUKOCYTE COUNT	FH6-92A	38988-01-01-01	01	5	5	5			100	SATISFACTORY	SUCCESSFUL
PLATELET COUNT	FH6-92A	38988-01-01-01	01	5	5	5			100	SATISFACTORY	SUCCESSFUL
SUMMARY TOTALS FOR HEMATOLOGY				30	30	30			100	SATISFACTORY	SUCCESSFUL

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E V A L U A T I O N

SURVEY SET: FH6 - A
CAP NUMBER: 38988-01-01-01 KIT# 01

DATE: 4/19/92

YOUR NEXT SURVEY KIT, SET FH6-B, IS SCHEDULED TO
BE SHIPPED ON MAY 19, 1992.

PENNINGTON BIOMEDICAL RSCH CTR
CLINICAL RESEARCH LABORATORY
6400 PERKINS RD.
BATON ROUGE LA 70808

CHECKED BY ..K. Murray.. DATE REVIEWED ..4/24/92..

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E V A L U A T I O N

SURVEY SET: FH6 - B
CAP NUMBER: 38988-01-01-01 KIT# 01
ATTENTION:
INSTITUTION: PENNINGTON BIOMEDICAL RSCH CTR

KIT MAILED: 5/19/92
QUEST. EVAL: 7/11/92

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PENNINGTON BIOMEDICAL RSCH CTR
CLINICAL RESEARCH LABORATORY
6400 PERKINS RD.
BATON ROUGE LA 70808

Km 7/24/92

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1992

COMP.HEMATOLOGY - FH6

EVALUATION

SURVEY SET: FH6 - B
CAP NUMBER: 38988-01-01-01 KIT# 01
ATTENTION:
INSTITUTION: PENNINGTON BIOMEDICAL RSCH CTR

KIT MAILED: 5/19/92
QUEST. EVAL: 7/11/92

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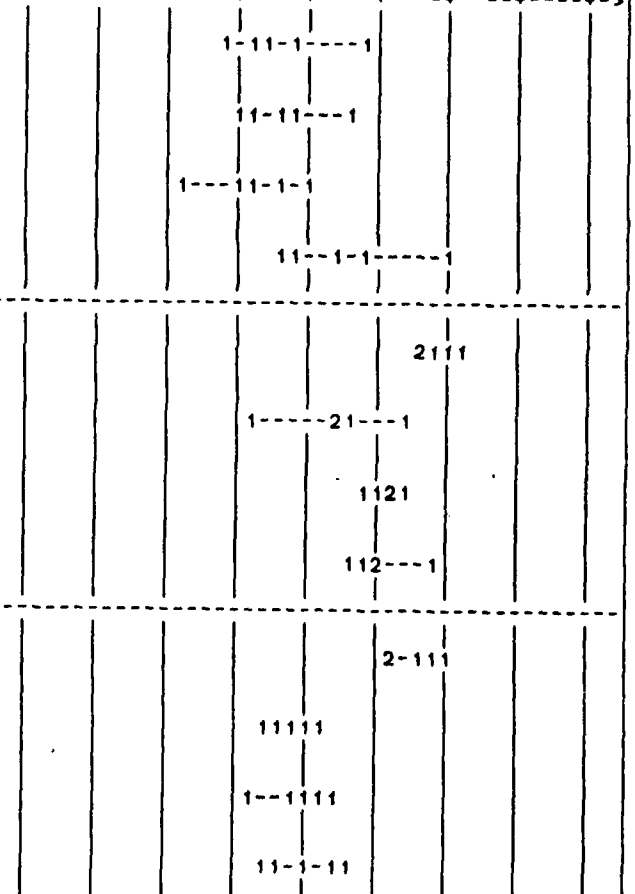
CONSTITUENT / UNIT OF MEASURE / YOUR REPORTED METHOD / COMPARATIVE METHOD	SPECIMEN	YOUR RESULT	EVAL CODE	MEAN	SD	NO. LABS	SDI	LIMITS OF ACCEPTABILITY LOWER	UPPER
WHITE BLOOD CELL COUNT / THOUSAND/UL / COULTER STKS	FH606	4.6	13	4.50	.14	803	+0.7	4.0 -	5.0
	FH607	6.6	13	6.72	.19	803	-0.6	6.1 -	7.3
	FH608	7.7	13	7.74	.18	802	-0.2	7.2 -	8.3
	FH609	10.5	13	10.61	.24	807	-0.5	9.8 -	11.4
	FH610	19.8	13	20.21	.43	804	-1.0	18.9 -	21.5
NO COMPARATIVE METHOD	FH606								
	FH607								
	FH608								
	FH609								
	FH610								
RED CELL COUNT (FH) / MILLION/UL / COULTER STKS	FH606	4.80	13	4.720	.062	809	+1.3	4.53 -	4.91
	FH607	4.30	13	4.221	.056	809	+1.4	4.05 -	4.39
	FH608	3.77	13	3.683	.050	808	+1.7	3.53 -	3.84
	FH609	3.62	13	3.560	.047	809	+1.3	3.41 -	3.71
	FH610	2.03	13	1.986	.027	802	+1.6	1.90 -	2.07
NO COMPARATIVE METHOD	FH606								
	FH607								
	FH608								
	FH609								
	FH610								
HEMOGLOBIN / G/DL / COULTER STKS	FH606	14.0	13	13.73	.17	804	+1.6	13.2 -	14.3
	FH607	12.4	13	12.19	.15	803	+1.4	11.7 -	12.7
	FH608	11.4	13	11.26	.14	803	+1.0	10.8 -	11.7
	FH609	10.5	13	10.29	.13	802	+1.6	9.9 -	10.7
	FH610	6.0	13	5.88	.11	806	+1.1	5.5 -	6.3
ALL INSTRUMENTS	FH606			13.75	.18	1188	+1.4		
	FH607			12.18	.15	1184	+1.5		
	FH608			11.24	.14	1180	+1.1		
	FH609			10.26	.15	1190	+1.6		
	FH610			5.88	.11	1177	+1.1		

PLOTS OF THE RELATIVE DISTANCE OF YOUR RESULTS FROM TARGETS AS PERCENTAGES OF ALLOWED DEVIATION
-100=LOWER LIMIT 0=TARGET +100=UPPER LIMIT



MT 7/29/92

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COMP.HEMATOLOGY - FH6

E V A L U A T I O N

SURVEY SET: FH6 - B
CAP NUMBER: 38988-01-01-01 KIT# 01
ATTENTION:
INSTITUTION: PENNINGTON BIOMEDICAL RSCH CTR

KIT MAILED: 5/19/92
QUEST. EVAL: 7/11/92

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CONSTITUENT / UNIT OF MEASURE / YOUR REPORTED METHOD / COMPARATIVE METHOD	SPECIMEN	YOUR RESULT	EVAL CODE	MEAN	SD	NO. LABS	SDI	LIMITS OF ACCEPTABILITY LOWER	UPPER	QTR	PLOTS OF THE RELATIVE DISTANCE OF YOUR RESULTS FROM TARGETS AS PERCENTAGES OF ALLOWED DEVIATION (-100=LOWER LIMIT, 0=TARGET, +100=UPPER LIMIT)
HEMATOCRIT	FH606	39.6	13	38.53	.57	807	+1.9	36.8 -	40.3	92B	
PERCENT	FH607	34.7	13	33.93	.51	809	+1.5	32.4 -	35.5		
COULTER STKS	FH608	32.1	13	31.12	.47	807	+2.1	29.7 -	32.6		
	FH609	29.3	13	28.66	.43	808	+1.5	27.3 -	30.0	92A	1------21--1
	FH610	16.9	13	16.34	.26	809	+2.2	15.5 -	17.2		
	FH606									91D	121-1
NO COMPARATIVE METHOD	FH607										
	FH608										
	FH609									91C	11--3
	FH610										
MCV	FH606	82.5	10	81.53	.62	803	+1.6			92B	
FEMTOLITERS	FH607	80.6	10	80.31	.59	801	+0.5				
COULTER STKS	FH608	85.2	10	84.41	.64	804	+1.2				
	FH609	81.0	10	80.41	.61	802	+1.0			92A	
	FH610	83.0	10	82.21	.65	801	+1.2				
	FH606									91D	
NO COMPARATIVE METHOD	FH607										
	FH608										
	FH609									91C	
	FH610										
RDW/RCMI	FH606	13.8	10	13.89	.21	799	-0.4			92B	
	FH607	13.9	10	13.85	.21	797	+0.2				
COULTER STKS	FH608	13.8	10	13.57	.20	793	+1.2				
	FH609	14.0	10	13.86	.21	797	+0.7			92A	
	FH610	14.2	10	14.08	.21	793	+0.6				
	FH606									91D	
NO COMPARATIVE METHOD	FH607										
	FH608										
	FH609									91C	
	FH610										

KA 7/24

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COMP.HEMATOLOGY - FH6

E V A L U A T I O N

SURVEY SET: FH6 - B
CAP NUMBER: 38988-01-01-01 KIT# 01
ATTENTION:
INSTITUTION: PENNINGTON BIOMEDICAL RSCH CTR

KIT MAILED: 5/19/92
QUEST. EVAL: 7/11/92

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CONSTITUENT / UNIT OF MEASURE / YOUR REPORTED METHOD / COMPARATIVE METHOD	SPECIMEN	YOUR RESULT	EVAL CODE	MEAN	SD	NO. LABS	SDI	LIMITS OF ACCEPTABILITY LOWER	UPPER	QTR	PLOTS OF THE RELATIVE DISTANCE OF YOUR RESULTS FROM TARGETS AS PERCENTAGES OF ALLOWED DEVIATION (-100=LOWER LIMIT, 0=TARGET, +100=UPPER LIMIT)
PLT CT-WHOLE BLOOD	FH606	516	13	495.4	16.2	805	+1.3	446 -	544	92B	
THOUSAND/UL	FH607	184	13	183.1	8.9	799	+0.1	156 -	210		
COULTER STKS	FH608	122	13	118.6	4.1	800	+0.8	106 -	131		
	FH609	85	13	86.6	3.3	805	-0.5	76 -	97	92A	
	FH610	292	13	284.9	10.1	804	+0.7	254 -	316		
NO COMPARATIVE METHOD	FH606									91D	
	FH607										
	FH608										
	FH609									91C	
	FH610										
NEUT/GRAN	FH606	41	10	40.4	6.2	799	+0.1			92B	
PERCENT	FH607	65	10	68.3	2.3	786	-1.4				
COULTER STKS	FH608	76	10	77.5	1.8	793	-0.8				
	FH609	40	10	44.6	3.3	798	-1.4			92A	
	FH610	72	10	76.0	2.5	801	-1.6				
NO COMPARATIVE METHOD	FH606									91D	
	FH607										
	FH608										
	FH609									91C	
	FH610										
LYMPHOCYTES	FH606	54	10	52.0	6.6	801	+0.3			92B	
PERCENT	FH607	28	10	25.2	2.2	795	+1.3				
COULTER STKS	FH608	15	10	15.2	1.6	803	-0.1				
	FH609	48	10	45.3	2.8	798	+1.0			92A	
	FH610	19	10	18.7	2.7	805	+0.1				
NO COMPARATIVE METHOD	FH606									91D	
	FH607										
	FH608										
	FH609									91C	
	FH610										

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COMP.HEMATOLOGY - FH6

E V A L U A T I O N

SURVEY SET: FH6 - B
CAP NUMBER: 38988-01-01-01 KIT# 01
ATTENTION:
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KIT MAILED: 5/19/92
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CONSTITUENT / UNIT OF MEASURE / YOUR REPORTED METHOD / COMPARATIVE METHOD	SPECIMEN	YOUR RESULT	EVAL CODE	MEAN	SD	NO. LABS	SDI	LIMITS OF ACCEPTABILITY LOWER	LIMITS OF ACCEPTABILITY UPPER	QTR
MONOCYTES / PERCENT / COULTER STKS	FH606	4	10	4.4	1.4	793	-0.3			92B
	FH607	3	10	2.3	.8	778	+0.9			
	FH608	2	10	1.3	.5	763	+1.4			
	FH609	7	10	5.0	1.5	795	+1.3			92A
	FH610	2	10	1.1	.5	797	+1.8			
NO COMPARATIVE METHOD	FH606									91D
	FH607									
	FH608									
	FH609									91C
	FH610									
EOSINOPHILS / PERCENT / COULTER STKS	FH606	1	10	2.0	.4	775	-2.5			92B
	FH607	4	10	4.1	.4	748	-0.3			
	FH608	7	10	6.2	.8	753	+1.0			
	FH609	5	10	5.1	1.0	764	-0.1			92A
	FH610	6	10	3.8	.9	783	+2.4			
NO COMPARATIVE METHOD	FH606									91D
	FH607									
	FH608									
	FH609									91C
	FH610									
BASOPHILS / PERCENT / COULTER STKS	FH606	0	10	1.0	1.3	771	-0.8			92B
	FH607	0	10	.1	.3	747	-0.3			
	FH608	0	10			740				
	FH609	0	10	.1	.3	743	-0.3			92A
	FH610	1	10	.4	.5	788	+1.2			
NO COMPARATIVE METHOD	FH606									91D
	FH607									
	FH608									
	FH609									91C
	FH610									

EVALUATION AND COMPARATIVE-METHOD STATISTICS

PLOTS OF THE RELATIVE DISTANCE OF YOUR RESULTS FROM TARGETS AS PERCENTAGES OF ALLOWED DEVIATION
-100=LOWER LIMIT 0=TARGET +100=UPPER LIMIT

QTR <-100 -75 -50 -25 0 25 50 75 100 ->

7/24/92

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1992

SURVEY SET: FH6 - B
CAP NUMBER: 38988-01-01-01 KIT# 01
ATTENTION:
INSTITUTION: PENNINGTON BIOMEDICAL RSCH CTR

COMP.HEMATOLOGY - FH6

E V A L U A T I O N

KIT MAILED: 5/19/92
QUEST. EVAL: 7/11/92

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CONSTITUENT / UNIT OF MEASURE / YOUR REPORTED METHOD / COMPARATIVE METHOD	SPECIMEN	YOUR RESULT	EVAL CODE	MEAN	SD	NO. LABS	SDI	LIMITS OF ACCEPTABILITY LOWER	LIMITS OF ACCEPTABILITY UPPER	PLOTS OF THE RELATIVE DISTANCE OF YOUR RESULTS FROM TARGETS AS PERCENTAGES OF ALLOWED DEVIATION (-100=LOWER LIMIT, 0=TARGET, +100=UPPER LIMIT) QTR
WHITE CELL 2ND INST THOUSAND/UL 2ND INST NOT REPORTED	FH606									92B
	FH607									
	FH608									
	FH609									92A
	FH610									
NO COMPARATIVE METHOD	FH606									91D
	FH607									
	FH608									
	FH609									91C
	FH610									
RED CELL CNT 2NDIN FH MILLION/UL 2ND INST NOT REPORTED	FH606					1				92B
	FH607					1				
	FH608					1				
	FH609					1				92A
	FH610					1				
NO COMPARATIVE METHOD	FH606									91D
	FH607									
	FH608									
	FH609									91C
	FH610									
HEMOGLOBIN 2ND INST. G/DL 2ND INST NOT REPORTED	FH606									92B
	FH607									
	FH608									
	FH609									92A
	FH610									
ALL INSTRUMENTS	FH606			13.75	.18	1188				91D
	FH607			12.18	.15	1184				
	FH608			11.24	.14	1180				
	FH609			10.26	.15	1190				91C
	FH610			5.88	.11	1177				

1 9 9 2

COMP.HEMATOLOGY - FH6

E V A L U A T I O N

SURVEY SET: FH6 - B
CAP NUMBER: 38988-01-01-01 KIT# 01
ATTENTION:
INSTITUTION: PENNINGTON BIOMEDICAL RSCH CTR

KIT MAILED: 5/19/92
QUEST. EVAL: 7/11/92

COPIES SENT TO: LOUISIANA

CONSTITUENT / UNIT OF MEASURE / YOUR REPORTED METHOD / COMPARATIVE METHOD	SPECIMEN	YOUR RESULT	EVAL CODE	MEAN	SD	NO. LABS	SDI	LIMITS OF ACCEPTABILITY LOWER	LIMITS OF ACCEPTABILITY UPPER	QTR	PLOTS OF THE RELATIVE DISTANCE OF YOUR RESULTS FROM TARGETS AS PERCENTAGES OF ALLOWED DEVIATION (-100=LOWER LIMIT, 0=TARGET, +100=UPPER LIMIT)
HEMATOCRIT 2ND INST. PERCENT — 2ND INST NOT REPORTED	FH606									92B	
	FH607										
	FH608										
	FH609									92A	
	FH610										
NO COMPARATIVE METHOD	FH606									91D	
	FH607										
	FH608										
	FH609									91C	
	FH610										
MCV 2ND INSTRUMENT FEMTOLITERS — 2ND INST NOT REPORTED	FH606									92B	
	FH607										
	FH608										
	FH609									92A	
	FH610										
NO COMPARATIVE METHOD	FH606									91D	
	FH607										
	FH608										
	FH609									91C	
	FH610										
RDW/RCMI 2ND INST. — 2ND INST NOT REPORTED	FH606									92B	
	FH607										
	FH608										
	FH609									92A	
	FH610										
NO COMPARATIVE METHOD	FH606									91D	
	FH607										
	FH608										
	FH609									91C	
	FH610										

SURVEY SET: FH6 - B
CAP NUMBER: 38988-01-01-01 KIT# 01
ATTENTION:
INSTITUTION: PENNINGTON BIOMEDICAL RSCH CTR

COMP.HEMATOLOGY - FH6

E V A L U A T I O N

KIT MAILED: 5/19/92
QUEST. EVAL: 7/11/92

COPIES SENT TO: LOUISIANA

CONSTITUENT / UNIT OF MEASURE / YOUR REPORTED METHOD / COMPARATIVE METHOD	SPECIMEN	YOUR RESULT	EVAL CODE	MEAN	SD	NO. LABS	SDI	LIMITS OF ACCEPTABILITY LOWER	LIMITS OF ACCEPTABILITY UPPER	QTR	PLOTS OF THE RELATIVE DISTANCE OF YOUR RESULTS FROM TARGETS AS PERCENTAGES OF ALLOWED DEVIATION (-100=LOWER LIMIT, 0=TARGET, +100=UPPER LIMIT)
PLATELET COUNT (2ND) / THOUSAND/UL / 2ND INST NOT REPORTED	FH606									92B	
	FH607										
	FH608										
	FH609									92A	
	FH610										
NO COMPARATIVE METHOD	FH606									91D	
	FH607										
	FH608										
	FH609									91C	
	FH610										
NEUT/GRAN (2ND INST) / PERCENT / 2ND INST NOT REPORTED	FH606									92B	
	FH607										
	FH608										
	FH609									92A	
	FH610										
NO COMPARATIVE METHOD	FH606									91D	
	FH607										
	FH608										
	FH609									91C	
	FH610										
LYMPHOCYTES (2ND INST) / PERCENT / 2ND INST NOT REPORTED	FH606									92B	
	FH607										
	FH608										
	FH609									92A	
	FH610										
NO COMPARATIVE METHOD	FH606									91D	
	FH607										
	FH608										
	FH609									91C	
	FH610										

SURVEY SET: FH6 - B
CAP NUMBER: 38988-01-01-01 KIT# 01
ATTENTION:
INSTITUTION: PENNINGTON BIOMEDICAL RSCH CTR

COMP.HEMATOLOGY - FH6

E V A L U A T I O N

KIT MAILED: 5/19/92
QUEST. EVAL: 7/11/92

COPIES SENT TO: LOUISIANA

CONSTITUENT / UNIT OF MEASURE / YOUR REPORTED METHOD / COMPARATIVE METHOD	SPECIMEN	YOUR RESULT	EVAL CODE	MEAN	SD	NO. LABS	SDI	LIMITS OF ACCEPTABILITY LOWER	LIMITS OF ACCEPTABILITY UPPER	QTR	PLOTS OF THE RELATIVE DISTANCE OF YOUR RESULTS FROM TARGETS AS PERCENTAGES OF ALLOWED DEVIATION -100=LOWER LIMIT 0=TARGET +100=UPPER LIMIT: -100 -75 -50 -25 0 25 50 75 100
MONOCYTES (2ND INST) PERCENT — 2ND INST NOT REPORTED	FH606									92B	
	FH607										
	FH608										
	FH609									92A	
	FH610										
NO COMPARATIVE METHOD	FH606									91D	
	FH607										
	FH608										
	FH609									91C	
	FH610										
EOSINOPHILS (2ND INST) PERCENT — 2ND INST NOT REPORTED	FH606									92B	
	FH607										
	FH608										
	FH609									92A	
	FH610										
NO COMPARATIVE METHOD	FH606									91D	
	FH607										
	FH608										
	FH609									91C	
	FH610										
BASOPHILS (2ND INST) PERCENT — 2ND INST NOT REPORTED	FH606									92B	
	FH607										
	FH608										
	FH609									92A	
	FH610										
NO COMPARATIVE METHOD	FH606									91D	
	FH607										
	FH608										
	FH609									91C	
	FH610										

College of American Pathologists
325 Waukegan Road Northfield, Illinois 60093-2750
800/323-4040

1992

COMP.HEMATOLOGY - FH6

EVALUATION

SURVEY SET: FH6 - B
CAP NUMBER: 38988-01-01-01 KIT# 01
ATTENTION:
INSTITUTION: PENNINGTON BIOMEDICAL RSCH CTR

KIT MAILED: 5/19/92
QUEST. EVAL: 7/11/92

CONSTITUENT METHODS	SPEC.	**** YOUR RESULT ****	CODE	GOOD PERFORMANCE	ACCEPTABLE PERFORMANCE
BLOOD CELL IDENT	HE-21	BAND/STAB/NEUTROPHIL	71	BAND/STAB/NEUTROPHIL	SEGMENTED NEUTROPHIL
	HE-22	EOSINOPHIL, ANY STAGE	71	EOSINOPHIL, ANY STAGE	
	HE-23	SPHEROCYTE	71	SPHEROCYTE	
	HE-24	MONOCYTE	71	MONOCYTE MONOCYTE, IMMATURE PRO	BAND/STAB/NEUTROPHIL GIANT BAND NEUTROPHL
	HE-25	BASOPHIL, MATURE	71	BASOPHIL, MATURE	
	HE-26	TEST NOT PERF. IN LAB.	10	SEE SUMMARY REPORT	SEE SUMMARY REPORT
	HE-27	TEST NOT PERF. IN LAB.	10	SEE SUMMARY REPORT	SEE SUMMARY REPORT
	HE-28	TEST NOT PERF. IN LAB.	10	SEE SUMMARY REPORT	SEE SUMMARY REPORT
	HE-29	TEST NOT PERF. IN LAB.	10	SEE SUMMARY REPORT	SEE SUMMARY REPORT
	HE-30	TEST NOT PERF. IN LAB.	10	SEE SUMMARY REPORT	SEE SUMMARY REPORT

College of American Pathologists
325 Waukegan Road Northfield, Illinois 60093-2750
800/323-4040

1992

COMP.HEMATOLOGY - FH6

EVALUATION

SURVEY SET: FH6 - B
CAP NUMBER: 38988-01-01-01 KIT# 01
ATTENTION:
INSTITUTION: PENNINGTON BIOMEDICAL RSCH CTR

DATE: 7/11/92

SUMMARY OF YOUR PERFORMANCE OVER THE LAST THREE QUARTERS FOR ANALYTES REGULATED UNDER THE 03-14-90 UNIFORM PT GUIDELINES OF CLIA'67

REGULATED ANALYTE	QUESTIONNAIRE ID: TEST EVENT	QUESTIONNAIRE ID: CAP #	QUESTIONNAIRE ID: KIT	TOTAL SAMPLES	SUMMARY OF YOUR RESPONSES: TOTAL	SUMMARY OF YOUR RESPONSES: ACCEPTABLE	PERFORMANCE SCORES BY YEAR-QUARTER: 91-4	92-1	92-2	CURRENT QUARTER PERFORMANCE INTERPRETATION	CUMULATIVE PERFORMANCE INTERPRETATION
CELL IDENTIFICATION	FH6-92B	38988-01-01-01	01	5	5	5	N/A	100	100	SATISFACTORY	SUCCESSFUL
ERYTHROCYTE COUNT	FH6-92B	38988-01-01-01	01	5	5	5	N/A	100	100	SATISFACTORY	SUCCESSFUL
HEMATOCRIT	FH6-92B	38988-01-01-01	01	5	5	5	N/A	100	100	SATISFACTORY	SUCCESSFUL
HEMOGLOBIN	FH6-92B	38988-01-01-01	01	5	5	5	N/A	100	100	SATISFACTORY	SUCCESSFUL
LEUKOCYTE COUNT	FH6-92B	38988-01-01-01	01	5	5	5	N/A	100	100	SATISFACTORY	SUCCESSFUL
PLATELET COUNT	FH6-92B	38988-01-01-01	01	5	5	5	N/A	100	100	SATISFACTORY	SUCCESSFUL
SUMMARY TOTALS FOR HEMATOLOGY				30	30	30		100	100	SATISFACTORY	SUCCESSFUL

NOTE: N/E = NOT ENROLLED

... THAT THE RESULTS OF THIS INTERLABORATORY COMPARISON BE USED AS A SOLE CRITERION FOR JUDGING THE PERFORMANCE OF ANY INDIVIDUAL ...

College of American Pathologists
325 Waukegan Road Northfield, Illinois 60093-2750
800/323-4040

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COMP.HEMATOLOGY - FH6

E V A L U A T I O N

SURVEY SET: FH6 - B
CAP NUMBER: 38988-01-01-01 KIT# 01
ATTENTION:
INSTITUTION: PENNINGTON BIOMEDICAL RSCH CTR

DATE: 7/11/92

YOUR NEXT SURVEY KIT, SET FH6-C, IS SCHEDULED
TO BE SHIPPED ON AUGUST 25, 1992.

PENNINGTON BIOMEDICAL RSCH CTR
CLINICAL RESEARCH LABORATORY
6400 PERKINS RD.
BATON ROUGE LA 70808

CHECKED BY KM DATE REVIEWED 7/24/92

1 9 9 2

CHEMISTRY-SERIES 3

E V A L U A T I O N

SURVEY SET: C3 - A
CAP NUMBER: 38988-01-01-01 KIT# 01
ATTENTION:
INSTITUTION: PENNINGTON BIOMEDICAL RSCH CTR

KIT MAILED: 3/16/92
QUEST. EVAL: 5/16/92

COPIES SENT TO: LOUISIANA

CONSTITUENT / UNIT OF MEASURE / YOUR REPORTED METHOD / COMPARATIVE METHOD	SPECIMEN	YOUR RESULT	EVAL CODE	MEAN	SD	NO. LABS	SDI	LIMITS OF ACCEPTABILITY LOWER	LIMITS OF ACCEPTABILITY UPPER	PLOTS OF THE RELATIVE DISTANCE OF YOUR RESULTS FROM TARGETS AS PERCENTAGES OF ALLOWED DEVIATION (-100=LOWER LIMIT, 0=TARGET, +100=UPPER LIMIT) QTR
CREATINE KINASE IU/L BECKMAN SYNCHRON CX4/5 BECKMAN/45 C	IE-01	320	10			1				92A
	IE-02	125	10			1				
	IE-03	321	10			1				
	IE-04	640	10			1				
	IE-05	188	10			1				
NO COMPARATIVE METHOD	IE-01									
	IE-02									
	IE-03									
	IE-04									
	IE-05									
CK-2 (CK MB) NG/ML TEST NOT PERFORMED	IE-01									92A
	IE-02									
	IE-03									
	IE-04									
	IE-05									
NO COMPARATIVE METHOD	IE-01									
	IE-02									
	IE-03									
	IE-04									
	IE-05									
CK-2 (CK-MB) IU/L TEST NOT PERFORMED	IE-01									92A
	IE-02									
	IE-03									
	IE-04									
	IE-05									
NO COMPARATIVE METHOD	IE-01									
	IE-02									
	IE-03									
	IE-04									
	IE-05									

College of American Pathologists
325 Waukegan Road Northfield, Illinois 60093-2750
800/323-4040

1992

CHEMISTRY-SERIES 3

EVALUATION

SURVEY SET: C3 - A
CAP NUMBER: 38988-01-01-01 KIT# 01
ATTENTION:
INSTITUTION: PENNINGTON BIOMEDICAL RSCH CTR

KIT MAILED: 3/16/92
QUEST. EVAL: 5/16/92

COPIES SENT TO: LOUISIANA

CONSTITUENT / UNIT OF MEASURE / YOUR REPORTED METHOD / COMPARATIVE METHOD	SPECIMEN	YOUR RESULT	EVAL CODE	MEAN	SD	NO. LABS	SDI	LIMITS OF ACCEPTABILITY LOWER	UPPER	QTR	PLOTS OF THE RELATIVE DISTANCE OF YOUR RESULTS FROM TARGETS AS PERCENTAGES OF ALLOWED DEVIATION (-100=LOWER LIMIT, 0=TARGET, +100=UPPER LIMIT)
LACTATE DEHYDROGENASE IU/L BECKMAN SYNCHRON CX4/5 BECKMAN/37 C	IE-01	323	13	330.2	11.8	185	-0.6	264	397	92A	22-1
	IE-02	371	13	379.2	12.0	183	-0.7	303	455		
	IE-03	416	13	427.0	15.4	186	-0.7	341	513		
	IE-04	310	13	319.6	11.6	188	-0.8	255	384		
	IE-05	139	13	138.9	5.6	188	+0.0	111	167		
NO COMPARATIVE METHOD	IE-01 IE-02 IE-03 IE-04 IE-05										
LD1 IU/L TEST NOT PERFORMED	IE-01 IE-02 IE-03 IE-04 IE-05									92A	
NO COMPARATIVE METHOD	IE-01 IE-02 IE-03 IE-04 IE-05										
BILIRUBIN, DIRECT MG/DL TEST NOT PERFORMED NOT GIVEN	C-92									92A 91D	
NO COMPARATIVE METHOD	C-92									91C 91B	

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CLINICAL MICROSCOPY

E V A L U A T I O N

SURVEY SET: CM - B
CAP NUMBER: 38988-01-01-01 KIT# 01
ATTENTION:
INSTITUTION: PENNINGTON BIOMEDICAL RSCH CTR

KIT MAILED: 7/08/91
QUEST. EVAL: 9/22/91

Kenneth Newman
10/1/91

PENNINGTON BIOMEDICAL RSCH CTR
CLINICAL RESEARCH LABORATORY
6400 PERKINS RD.
BATON ROUGE LA 70808

1 9 9 1

CLINICAL MICROSCOPY

E V A L U A T I O N

SURVEY SET: CM - B
CAP NUMBER: 38988-01-01-01 KIT# 01
ATTENTION:
INSTITUTION: PENNINGTON BIOMEDICAL RSCH CTR

KIT MAILED: 7/08/91
QUEST. EVAL: 9/22/91

CONSTITUENT / METHODS	SPEC.	YOUR RESULT	**** CODE	EVALUATION MEAN	STATISTICS S.D.	LABS	**** SDI	********** COMPARATIVE METHODS	STATISTICS MEAN	S.D.	LABS	SDI
SPECIFIC GRAVITY,URINE												
AMES CLINITEK 200	CM-11	1.010	13	1.0156	.0023	1515	-2.4	REFRACTOMETER	1.0103	.0008	2486	-0.4
	CM-12	1.015	13	1.0241	.0019	1503	-4.8		1.0123	.0010	2502	+2.7
	CM-13	1.010	13	1.0151	.0022	1528	-2.3		1.0098	.0009	2500	+0.2
	CM-14	1.005	13	1.0123	.0026	1532	-2.8		1.0060	.0008	2471	-1.3
	CM-15	1.010	13	1.0200	.0020	1513	-5.0		1.0088	.0009	2498	+1.3
OSMOLALITY-URINE	MOSM/KG H2O											
TEST NOT PERFORMED	CM-11		10					ADVANCED INSTRUMENTS	439.0	6.7	1241	+0.0
	CM-12		10						548.2	7.0	1224	+0.0
	CM-13		10						420.2	5.8	1218	+0.0
	CM-14		10						163.8	3.2	1220	+0.0
	CM-15		10						246.5	4.1	1215	+0.0
PROTEIN QUANT. URINE	MG/DL											
TEST NOT PERFORMED	CM-11		10					NO COMPARATIVE METHOD				
	CM-12		10									
	CM-13		10									
	CM-14		10									
	CM-15		10									
SIMULATED BODY FLUID	UL											
TEST NOT PERFORMED	CM-16		10					NO COMPARATIVE METHOD				

CONSTITUENT / METHODS	SPEC.	**** YOUR RESULT ****	CODE	GOOD PERFORMANCE	ACCEPTABLE PERFORMANCE
PH IN URINE					
AMES-CLINITEK	CM-11	8.0 OR MORE	61	7.0 7.5 8.0 OR MORE	
	CM-12	6.5	61	6.0 6.5 7.0	

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CLINICAL MICROSCOPY

E V A L U A T I O N

CAP NUMBER: 38988-01-01-01 KIT# 01

CONSTITUENT METHODS	SPEC.	**** YOUR RESULT ****	CODE	GOOD PERFORMANCE	ACCEPTABLE PERFORMANCE
PH IN URINE					
	CM-13	8.0 OR MORE	61	7.0 7.5 8.0 OR MORE	
	CM-14	8.0 OR MORE	61	7.0 7.5 8.0 OR MORE	
	CM-15	8.0 OR MORE	61	7.0 7.5 8.0 OR MORE	
PROTEIN QUAL, URINE AMES-CLINITEK	CM-11	NEGATIVE	61	NEGATIVE	
	CM-12	30 MG/DL (1+)	61	30 MG/DL (1+)	TRACE 100 MG/DL (2+) 300-500 MG/DL (3+) 1000 MG/DL(4+)OR MORE
	CM-13	NEGATIVE	61	NEGATIVE	
	CM-14	30 MG/DL (1+)	61	30 MG/DL (1+)	TRACE 100 MG/DL (2+) 300-500 MG/DL (3+) 1000 MG/DL(4+)OR MORE
	CM-15	300-500 MG/DL (3+)	61	300-500 MG/DL (3+)	TRACE 30 MG/DL (1+) 100 MG/DL (2+) 1000 MG/DL(4+)OR MORE
GLUCOSE REDUC SUB-UR AMES-CLINITEK	CM-11	100 MG/DL	62	SEE SUMMARY REPORT	SEE SUMMARY REPORT
	CM-12	500 MG/DL	61	500 MG/DL	< 100 MG/DL 100 MG/DL 250 MG/DL 1000 MG/DL 2000 MG/DL OR MORE
	CM-13	100 MG/DL	62	SEE SUMMARY REPORT	SEE SUMMARY REPORT
	CM-14	NEGATIVE	61	NEGATIVE	

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CLINICAL MICROSCOPY

E V A L U A T I O N

CAP NUMBER: 38988-01-01-01 KIT# 01

CONSTITUENT METHODS	SPEC.	**** YOUR RESULT ****	CODE	GOOD PERFORMANCE	ACCEPTABLE PERFORMANCE
GLUCOSE REDUC SUB-UR	CM-15	NEGATIVE	61	NEGATIVE	
KETONES-URINE AMES-CLINITEK	CM-11	LARGE (3+)	61	LARGE (3+)	SMALL (1+) MODERATE (2+)
	CM-12	NEGATIVE	61	NEGATIVE	
	CM-13	LARGE (3+)	61	LARGE (3+)	SMALL (1+) MODERATE (2+)
	CM-14	LARGE (3+)	61	LARGE (3+)	SMALL (1+) MODERATE (2+)
	CM-15	LARGE (3+)	61	LARGE (3+)	SMALL (1+) MODERATE (2+)
BILIRUBIN, URINE AMES-CLINITEK	CM-11	NEGATIVE	61	NEGATIVE	
	CM-12	NEGATIVE	61	NEGATIVE	
	CM-13	NEGATIVE	61	NEGATIVE	
	CM-14	TRACE (SMALL OR 1+)	62	SEE SUMMARY REPORT	SEE SUMMARY REPORT
	CM-15	POSITIVE (MOD OR 2+)	62	SEE SUMMARY REPORT	SEE SUMMARY REPORT
BLOOD/HEMOGLOBIN URINE AMES-CLINITEK	CM-11	POSITIVE (50 ERY/UL)	61	POSITIVE (50 ERY/UL) MARKED POSITIVE (250)	TRACE (5-10 ERY/UL)
	CM-12	NEGATIVE	61	NEGATIVE	
	CM-13	POSITIVE (50 ERY/UL)	61	POSITIVE (50 ERY/UL) MARKED POSITIVE (250)	TRACE (5-10 ERY/UL)
	CM-14	TRACE (5-10 ERY/UL)	61	TRACE (5-10 ERY/UL) POSITIVE (50 ERY/UL)	MARKED POSITIVE (250)
	CM-15	NEGATIVE	62	SEE SUMMARY REPORT	SEE SUMMARY REPORT
LEUKOCYTE ESTERASE AMES-CLINITEK	CM-11	NEGATIVE	61	NEGATIVE	

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CLINICAL MICROSCOPY

E V A L U A T I O N

CAP NUMBER: 38988-01-01-01 KIT# 01

CONSTITUENT METHODS	SPEC.	**** YOUR RESULT ****	CODE	GOOD PERFORMANCE	ACCEPTABLE PERFORMANCE
LEUKOCYTE ESTERASE	CM-12	@ TRACE	61	SMALL (1+) MODERATE (2+)	TRACE LARGE (3+)
	CM-13	NEGATIVE	61	NEGATIVE	
	CM-14	LARGE (3+)	61	MODERATE (2+) LARGE (3+)	TRACE SMALL (1+)
	CM-15	NEGATIVE	61	NEGATIVE	
NITRITE/URINE AMES-CLINITEK	CM-11	NEGATIVE	61	NEGATIVE	
	CM-12	POSITIVE	61	POSITIVE	
	CM-13	NEGATIVE	61	NEGATIVE	
	CM-14	POSITIVE	62	SEE SUMMARY REPORT	SEE SUMMARY REPORT
	CM-15	NEGATIVE	61	NEGATIVE	
URINE HCG TEST NOT PERFORMED	CM-11		10	SEE SUMMARY REPORT	SEE SUMMARY REPORT
	CM-12		10	SEE SUMMARY REPORT	SEE SUMMARY REPORT
	CM-13		10	SEE SUMMARY REPORT	SEE SUMMARY REPORT
	CM-14		10	SEE SUMMARY REPORT	SEE SUMMARY REPORT
	CM-15		10	SEE SUMMARY REPORT	SEE SUMMARY REPORT
URINE SEDIMENT IDENT.	CM-17	URIC ACID CRYSTAL	71	URIC ACID CRYSTAL	
	CM-18	STARCH GRANULE	71	STARCH GRANULE	
	CM-19	ENTEROBIUS VERMICULAR	71	ENTEROBIUS VERMICULAR	
CSF & BODY FLUID	CM-20	TEST NOT PERF. IN LAB.	71	PLASMA CELL LYMPH. REACT.(ATYPICL)	
	CM-21	TEST NOT PERF. IN LAB.	71	MESOTHELIAL CELL	MONOCYTE/MACROPHAGE

@ RESULT ACCEPTABLE

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CLINICAL MICROSCOPY

E V A L U A T I O N

SURVEY SET: CM - C
CAP NUMBER: 38988-01-01-01 KIT# 01
ATTENTION:
INSTITUTION: PENNINGTON BIOMEDICAL RSCH CTR

KIT MAILED: 9/30/91
QUEST. EVAL: 12/03/91

PENNINGTON BIOMEDICAL RSCH CTR
CLINICAL RESEARCH LABORATORY
6400 PERKINS RD.
BATON ROUGE LA 70808

1 9 9 1

CLINICAL MICROSCOPY

E V A L U A T I O N

SURVEY SET: CM - C
CAP NUMBER: 38988-01-01-01 KIT# 01
ATTENTION:
INSTITUTION: PENNINGTON BIOMEDICAL RSCH CTR

KIT MAILED: 9/30/91
QUEST. EVAL: 12/03/91

CONSTITUENT / METHODS	SPEC.	YOUR RESULT	**** CODE	EVALUATION MEAN	STATISTICS S.D.	LABS	**** SDI	********** COMPARATIVE METHODS	STATISTICS MEAN	S.D.	LABS	SDI
SPECIFIC GRAVITY,URINE												
REFRACTOMETER	CM-22	1.014	13	1.0130	.0010	2491	+1.0	REFRACTOMETER	1.0130	.0010	2491	+1.0
	CM-23	1.017	13	1.0166	.0010	2480	+0.4		1.0166	.0010	2480	+0.4
	CM-24	1.025	13	1.0246	.0010	2474	+0.4		1.0246	.0010	2474	+0.4
	CM-25	1.014	13	1.0130	.0011	2488	+0.9		1.0130	.0011	2488	+0.9
	CM-26	1.011	13	1.0099	.0008	2485	+1.4		1.0099	.0008	2485	+1.4
OSMOLALITY-URINE MOSM/KG H2O												
TEST NOT PERFORMED	CM-22		10					ADVANCED INSTRUMENTS	725.5	9.9	1123	+0.0
	CM-23		10						837.8	8.3	1130	+0.0
	CM-24		10						1053.5	13.4	1125	+0.0
	CM-25		10						725.9	10.5	1128	+0.0
	CM-26		10						201.1	4.2	1137	+0.0
PROTEIN QUANT. URINE MG/DL												
TRICHLOROACETIC ACID3%	CM-22	0%	13	10.4	4.4							
	CM-23	30	13	38.5	6.2							
	CM-24	500	13	839.4	193.3							
	CM-25	0%	13	10.9	4.7							
	CM-26	100	13	81.8	35.1							

CONSTITUENT / METHODS	SPEC.	**** YOUR RESULT ****	CODE	GOOD PERFORMANCE	ACCEPTABLE PERFORMANCE
PH IN URINE					
AMES-CLINITEK	CM-22	7.5	61	7.0 7.5 8.0 OR MORE	
	CM-23	6.5	61	5.5 6.0 6.5	
	CM-24	7.5	61	7.0 7.5 8.0 OR MORE	

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CLINICAL MICROSCOPY

E V A L U A T I O N

CAP NUMBER: 38988-01-01-01 KIT# 01

CONSTITUENT METHODS	SPEC.	**** YOUR RESULT ****	CODE	GOOD PERFORMANCE	ACCEPTABLE PERFORMANCE
PH IN URINE					
	CM-25	7.5	61	7.0 7.5 8.0 OR MORE	
	CM-26	8.0 OR MORE	61	7.0 7.5 8.0 OR MORE	
PROTEIN QUAL, URINE AMES-CLINITEK					
	CM-22	NEGATIVE	61	NEGATIVE	
	CM-23	30 MG/DL (1+)	61	30 MG/DL (1+)	TRACE 100 MG/DL (2+) 300-500 MG/DL (3+) 1000 MG/DL(4+)OR MORE
	CM-24	300-500 MG/DL (3+)	61	300-500 MG/DL (3+)	TRACE 30 MG/DL (1+) 100 MG/DL (2+) 1000 MG/DL(4+)OR MORE
	CM-25	NEGATIVE	61	NEGATIVE	
	CM-26	100 MG/DL (2+)	61	100 MG/DL (2+) 300-500 MG/DL (3+)	TRACE 30 MG/DL (1+) 1000 MG/DL(4+)OR MORE
GLUCOSE REDUC SUB-UR AMES-CLINITEK					
	CM-22	NEGATIVE	61	NEGATIVE	
	CM-23	250 MG/DL	61	250 MG/DL 500 MG/DL	< 100 MG/DL 100 MG/DL 1000 MG/DL 2000 MG/DL OR MORE
	CM-24	NEGATIVE	62	SEE SUMMARY REPORT	SEE SUMMARY REPORT
	CM-25	NEGATIVE	61	NEGATIVE	
	CM-26	250 MG/DL	61	250 MG/DL 500 MG/DL	< 100 MG/DL 100 MG/DL 1000 MG/DL 2000 MG/DL OR MORE

PT 12-92

CAP NUMBER: 38988-01-01-01 KIT# 01

CLINICAL MICROSCOPY

E V A L U A T I O N

CONSTITUENT METHODS	SPEC.	**** YOUR RESULT ****	CODE	GOOD PERFORMANCE	ACCEPTABLE PERFORMANCE
KETONES-URINE					
AMES-CLINITEK	CM-22	NEGATIVE	61	NEGATIVE	
	CM-23	NEGATIVE	61	NEGATIVE	
	CM-24	MODERATE (2+)	61	MODERATE (2+) LARGE (3+)	SMALL (1+)
	CM-25	NEGATIVE	61	NEGATIVE	
	CM-26	LARGE (3+)	61	LARGE (3+)	SMALL (1+) MODERATE (2+)
BILIRUBIN, URINE					
AMES-CLINITEK	CM-22	NEGATIVE	61	NEGATIVE	
	CM-23	NEGATIVE	61	NEGATIVE	
	CM-24	● TRACE (SMALL OR 1+)	61	POSITIVE (MOD OR 2+)	TRACE (SMALL OR 1+) LARGE AMOUNT (3+)
	CM-25	NEGATIVE	61	NEGATIVE	
	CM-26	● TRACE (SMALL OR 1+)	61	POSITIVE (MOD OR 2+)	TRACE (SMALL OR 1+) LARGE AMOUNT (3+)
BLOOD/HEMOGLOBIN URINE					
AMES-CLINITEK	CM-22	NEGATIVE	61	NEGATIVE	
	CM-23	NEGATIVE	61	NEGATIVE	
	CM-24	TRACE (5-10 ERY/UL)	61	TRACE (5-10 ERY/UL) POSITIVE (50 ERY/UL)	MARKED POSITIVE (250)
	CM-25	NEGATIVE	61	NEGATIVE	
	CM-26	POSITIVE (50 ERY/UL)	61	POSITIVE (50 ERY/UL) MARKED POSITIVE (250)	TRACE (5-10 ERY/UL)
LEUKOCYTE ESTERASE					
AMES-CLINITEK	CM-22	NEGATIVE	61	NEGATIVE	
	CM-23	MODERATE (2+)	61	TRACE SMALL (1+) MODERATE (2+)	LARGE (3+)

PT 2-92

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CLINICAL MICROSCOPY

E V A L U A T I O N

CAP NUMBER: 38988-01-01-01 KIT# 01

CONSTITUENT METHODS	SPEC.	**** YOUR RESULT ****	CODE	GOOD PERFORMANCE	ACCEPTABLE PERFORMANCE
LEUKOCYTE ESTERASE					
	CM-24	MODERATE (2+)	61	MODERATE (2+) LARGE (3+)	TRACE SMALL (1+)
	CM-25	NEGATIVE	61	NEGATIVE	
	CM-26	MODERATE (2+)	61	MODERATE (2+) LARGE (3+)	TRACE SMALL (1+)
NITRITE/URINE					
AMES-CLINITEK	CM-22	NEGATIVE	61	NEGATIVE	
	CM-23	NEGATIVE	62	SEE SUMMARY REPORT	SEE SUMMARY REPORT
	CM-24	POSITIVE	61	POSITIVE	
	CM-25	NEGATIVE	61	NEGATIVE	
	CM-26	NEGATIVE	61	NEGATIVE	
URINE HCG					
TEST NOT PERFORMED	CM-22		10	SEE SUMMARY REPORT	SEE SUMMARY REPORT
	CM-23		10	SEE SUMMARY REPORT	SEE SUMMARY REPORT
	CM-24		10	SEE SUMMARY REPORT	SEE SUMMARY REPORT
	CM-25		10	SEE SUMMARY REPORT	SEE SUMMARY REPORT
	CM-26		10	SEE SUMMARY REPORT	SEE SUMMARY REPORT
SIMULATED URINE SEDIMT	RBC	1-2	10	SEE SUMMARY REPORT	SEE SUMMARY REPORT
	WBC	1-2	10	SEE SUMMARY REPORT	SEE SUMMARY REPORT
	EPI	NEGATIVE	10	SEE SUMMARY REPORT	SEE SUMMARY REPORT
	BAC	LESS THAN 10	10	SEE SUMMARY REPORT	SEE SUMMARY REPORT
	YEAST	POSITIVE	10	SEE SUMMARY REPORT	SEE SUMMARY REPORT
	MUCUS	NEGATIVE	10	SEE SUMMARY REPORT	SEE SUMMARY REPORT
	SPERM	NEGATIVE	10	SEE SUMMARY REPORT	SEE SUMMARY REPORT
	CAST	NEGATIVE	10	SEE SUMMARY REPORT	SEE SUMMARY REPORT

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CLINICAL MICROSCOPY

E V A L U A T I O N

CAP NUMBER: 38988-01-01-01 KIT# 01

CONSTITUENT / METHODS	SPEC.	**** YOUR RESULT ****	CODE	GOOD PERFORMANCE	ACCEPTABLE PERFORMANCE
SIMULATED URINE SEDIMT	CAST		10	SEE SUMMARY REPORT	SEE SUMMARY REPORT
	CRYST	NEGATIVE	10	SEE SUMMARY REPORT	SEE SUMMARY REPORT
	CRYST		10	SEE SUMMARY REPORT	SEE SUMMARY REPORT
URINE SEDIMENT IDENT.	CM-27	FIBER FECAL CONTAMIN	71	FIBER FECAL CONTAMIN	
	CM-28	* NON-HEMOGLOBIN PIGMENT	71	CELLULAR, RTE CAST	CELLULAR,NEUT. CAST GRANULAR CAST
CSF & BODY FLUID	CM-29	TEST NOT PERF. IN LAB.	71	ERYTHROCYTE LADEN MACR	MONOCYTE/MACROPHAGE
	CM-30	TEST NOT PERF. IN LAB.	71	HEMATIN CRYSTALS	NEUTROPHIL W/CRYSTAL CALCIUM BILIRUB. CRYST CRYSTALS (NOS)
	CM-31	TEST NOT PERF. IN LAB.	71	HEMOSIDERIN LADEN MACR	

* NOT ACCEPTABLE
# RESULT EXCEEDS FIXED CRITERIA
@ RESULT ACCEPTABLE

YOUR NEXT SURVEY KIT, SET CM-D, IS SCHEDULED TO BE SHIPPED JANUARY 6, 1992.

PENNINGTON BIOMEDICAL RSCH CTR
CLINICAL RESEARCH LABORATORY
6400 PERKINS RD.
BATON ROUGE LA 70808

CHECKED BY R. Tulley DATE REVIEWED 1-2-92

1-2-92

College of American Pathologists
325 Waukegan Road Northfield, Illinois 60093-2750
800/323-4040

1991

CLINICAL MICROSCOPY

EVALUATION

SURVEY SET: CM - D
CAP NUMBER: 38988-01-01-01 KIT# 01
ATTENTION:
INSTITUTION: PENNINGTON BIOMEDICAL RSCH CTR

KIT MAILED: 1/06/92
QUEST. EVAL: 3/07/92

CONSTITUENT / METHODS	SPEC.	YOUR RESULT	**** CODE	EVALUATION MEAN	STATISTICS S.D.	LABS	**** SDI	********** COMPARATIVE STATISTICS ********** METHODS	MEAN	S.D.	LABS	SDI
SPECIFIC GRAVITY, NOT GIVEN												
OSMOLALITY-URINE	MOSM/KG H2O											
TEST NOT PERFORMED	CM-33		10					ADVANCED INSTRUMENTS	1389.6	17.6	955	+0.0
	CM-34		10						464.9	6.3	966	+0.0
	CM-35		10						722.4	13.0	952	+0.0
	CM-36		10						247.3	4.3	964	+0.0
	CM-37		10						1082.3	13.8	962	+0.0
PROTEIN QUANT. URINE	MG/DL											
NOT GIVEN	CM-33	300	10					NO COMPARATIVE METHOD				
	CM-34	100	10									
	CM-35	0	10									
	CM-36	0	10									
	CM-37	100	10									
SIMULATED BODY FLUID	UL											
TEST NOT PERFORMED	CM-43		10					NO COMPARATIVE METHOD				

CONSTITUENT / METHODS	SPEC.	**** YOUR RESULT ****	CODE	GOOD PERFORMANCE	ACCEPTABLE PERFORMANCE
PH IN URINE					
AMES-CLINITEK	CM-33	5.5	61	5.0 5.5 6.0	

RT 3-16-92

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CLINICAL MICROSCOPY

E V A L U A T I O N

SURVEY SET: CM - D
CAP NUMBER: 38988-01-01-01 KIT# 01

CONSTITUENT METHODS	SPEC.	**** YOUR RESULT ****	CODE	GOOD PERFORMANCE	ACCEPTABLE PERFORMANCE
PH IN URINE					
	CM-34	8.0 OR MORE	61	7.0 7.5 8.0 OR MORE	
	CM-35	7.5	61	7.0 7.5 8.0 OR MORE	
	CM-36	7.5	61	7.0 7.5 8.0 OR MORE	
	CM-37	5.0	61	5.0 5.5 6.0	
PROTEIN QUAL. URINE AMES-CLINITEK	CM-33	100 MG/DL (2+)	61	100 MG/DL (2+) 300-500 MG/DL (3+)	TRACE 30 MG/DL (1+) 1000 MG/DL(4+)OR MORE
	CM-34	100 MG/DL (2+)	61	100 MG/DL (2+) 300-500 MG/DL (3+)	TRACE 30 MG/DL (1+) 1000 MG/DL(4+)OR MORE
	CM-35	NEGATIVE	61	NEGATIVE	
	CM-36	NEGATIVE	61	NEGATIVE	
	CM-37	100 MG/DL (2+)	61	100 MG/DL (2+) 300-500 MG/DL (3+)	TRACE 30 MG/DL (1+) 1000 MG/DL(4+)OR MORE
GLUCOSE REDUC SUB-UR AMES-CLINITEK	CM-33	500 MG/DL	62	SEE SUMMARY REPORT	SEE SUMMARY REPORT
	CM-34	500 MG/DL	61	500 MG/DL 1000 MG/DL	< 100 MG/DL 100 MG/DL 250 MG/DL 2000 MG/DL OR MORE
	CM-35	NEGATIVE	61	NEGATIVE	

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CLINICAL MICROSCOPY

E V A L U A T I O N

SURVEY SET: CM - D
CAP NUMBER: 38988-01-01-01 KIT# 01

CONSTITUENT METHODS	SPEC.	**** YOUR RESULT ****	CODE	GOOD PERFORMANCE	ACCEPTABLE PERFORMANCE
GLUCOSE REDUC SUB-UR					
	CM-36	NEGATIVE	61	NEGATIVE	
	CM-37	100 MG/DL	61	< 100 MG/DL 100 MG/DL	250 MG/DL 500 MG/DL 1000 MG/DL 2000 MG/DL OR MORE
KETONES-URINE AMES-CLINITEK					
	CM-33	NEGATIVE	61	NEGATIVE	
	CM-34	NEGATIVE	61	NEGATIVE	
	CM-35	NEGATIVE	61	NEGATIVE	
	CM-36	LARGE (3+)	61	LARGE (3+)	SMALL (1+) MODERATE (2+)
	CM-37	NEGATIVE	61	NEGATIVE	
BILIRUBIN, URINE AMES-CLINITEK					
	CM-33	NEGATIVE	61	NEGATIVE	
	CM-34	POSITIVE (MOD OR 2+)	61	POSITIVE (MOD OR 2+) LARGE AMOUNT (3+)	TRACE (SMALL OR 1+)
	CM-35	NEGATIVE	61	NEGATIVE	
	CM-36	NEGATIVE	61	NEGATIVE	
	CM-37	NEGATIVE	61	NEGATIVE	
BLOOD/HEMOGLOBIN URINE AMES-CLINITEK					
	CM-33	TRACE (5-10 ERY/UL)	61	TRACE (5-10 ERY/UL) POSITIVE (50 ERY/UL)	MARKED POSITIVE (250)
	CM-34	POSITIVE (50 ERY/UL)	61	POSITIVE (50 ERY/UL) MARKED POSITIVE (250)	TRACE (5-10 ERY/UL)
	CM-35	NEGATIVE	61	NEGATIVE	
	CM-36	NEGATIVE	61	NEGATIVE	

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CLINICAL MICROSCOPY

E V A L U A T I O N

SURVEY SET: CM - D
CAP NUMBER: 38988-01-01-01 KIT# 01

CONSTITUENT METHODS	SPEC.	**** YOUR RESULT ****	CODE	GOOD PERFORMANCE	ACCEPTABLE PERFORMANCE
BLOOD/HEMOGLOBIN URINE					
	CM-37	TRACE (5-10 ERY/UL)	61	TRACE (5-10 ERY/UL) POSITIVE (50 ERY/UL)	MARKED POSITIVE (250)
LEUKOCYTE ESTERASE					
AMES-CLINITEK	CM-33	NEGATIVE	61	NEGATIVE	
	CM-34	MODERATE (2+)	61	MODERATE (2+)	TRACE SMALL (1+) LARGE (3+)
	CM-35	NEGATIVE	61	NEGATIVE	
	CM-36	NEGATIVE	61	NEGATIVE	
	CM-37	NEGATIVE	61	NEGATIVE	
NITRITE/URINE					
AMES-CLINITEK	CM-33	POSITIVE	61	POSITIVE	
	CM-34	NEGATIVE	61	NEGATIVE	
	CM-35	NEGATIVE	61	NEGATIVE	
	CM-36	NEGATIVE	61	NEGATIVE	
	CM-37	* NEGATIVE	61	POSITIVE	
URINE HCG					
TEST NOT PERFORMED	CM-33		10	SEE SUMMARY REPORT	SEE SUMMARY REPORT
	CM-34		10	SEE SUMMARY REPORT	SEE SUMMARY REPORT
	CM-35		10	SEE SUMMARY REPORT	SEE SUMMARY REPORT
	CM-36		10	SEE SUMMARY REPORT	SEE SUMMARY REPORT
	CM-37		10	SEE SUMMARY REPORT	SEE SUMMARY REPORT
SIMULATED URINE SEDIMT	RBC	1-2	10	SEE SUMMARY REPORT	SEE SUMMARY REPORT
	WBC	NEGATIVE	10	SEE SUMMARY REPORT	SEE SUMMARY REPORT
	EPI	NEGATIVE	10	SEE SUMMARY REPORT	SEE SUMMARY REPORT

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800/323-4040

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CLINICAL MICROSCOPY

E V A L U A T I O N

SURVEY SET: CM - D
CAP NUMBER: 38988-01-01-01 KIT# 01

CONSTITUENT METHODS	SPEC.	**** YOUR RESULT ****	CODE	GOOD PERFORMANCE	ACCEPTABLE PERFORMANCE
SIMULATED URINE SEDIMT	BAC	LESS THAN 10	10	SEE SUMMARY REPORT	SEE SUMMARY REPORT
	YEAST	NEGATIVE	10	SEE SUMMARY REPORT	SEE SUMMARY REPORT
	MUCUS	NEGATIVE	10	SEE SUMMARY REPORT	SEE SUMMARY REPORT
	SPERM	NEGATIVE	10	SEE SUMMARY REPORT	SEE SUMMARY REPORT
	CAST	NEGATIVE	10	SEE SUMMARY REPORT	SEE SUMMARY REPORT
	CAST		10	SEE SUMMARY REPORT	SEE SUMMARY REPORT
	CRYST	NEGATIVE	10	SEE SUMMARY REPORT	SEE SUMMARY REPORT
	CRYST		10	SEE SUMMARY REPORT	SEE SUMMARY REPORT
URINE SEDIMENT IDENT.	CM-38	* URIC ACID CRYSTAL	71	CHOLESTEROL CRYSTALS	
	CM-39	ERYTHROCYTES	71	ERYTHROCYTES	
CSF & BODY FLUID	CM-40	TEST NOT PERF. IN LAB.	71	LYMPHOCYTE	LYMPH. REACT.(ATYPICL)
	CM-41	TEST NOT PERF. IN LAB.	71	EOSINOPHIL	
	CM-42	TEST NOT PERF. IN LAB.	71	NEUTROPHIL SEGMENTED	
SIMULATED BODY FLUID	CM-43		10	SEE SUMMARY REPORT	SEE SUMMARY REPORT

* NOT ACCEPTABLE
\# RESULT EXCEEDS FIXED CRITERIA

RT 2.26.92

College of American Pathologists
325 Waukegan Road Northfield, Illinois 60093-2750
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1992

CLINICAL MICROSCOPY

EVALUATION

SURVEY SET: CM - A
CAP NUMBER: 38988-01-01-01 KIT# 01
ATTENTION:
INSTITUTION: PENNINGTON BIOMEDICAL RSCH CTR

KIT MAILED: 3/30/92
QUEST. EVAL: 6/03/92

COPIES SENT TO: LOUISIANA

PENNINGTON BIOMEDICAL RSCH CTR
CLINICAL RESEARCH LABORATORY
6400 PERKINS RD.
BATON ROUGE LA 70808

KM 6/8/92

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325 Waukegan Road Northfield, Illinois 60093-2750
800/323-4040

1992

CLINICAL MICROSCOPY

EVALUATION

SURVEY SET: CM - A
CAP NUMBER: 38988-01-01-01 KIT# 01
ATTENTION:
INSTITUTION: PENNINGTON BIOMEDICAL RSCH CTR

KIT MAILED: 3/30/92
QUEST. EVAL: 6/03/92

COPIES SENT TO: LOUISIANA

CONSTITUENT / METHODS	SPEC.	YOUR RESULT	**** CODE	EVALUATION MEAN	STATISTICS S.D.	STATISTICS LABS	**** SDI	********** COMPARATIVE STATISTICS ********** METHODS	MEAN	S.D.	LABS	SDI
SPECIFIC GRAVITY,URINE												
AMES CLINITEK 200	CM-01	1.030	13	1.0291	.0026	1528	+0.3	REFRACTOMETER				
	CM-02	1.025	13	1.0214	.0031	1540	+1.2					
	CM-03	1.030	13	1.0285	.0024	1536	+0.6					
	CM-04	1.015	13	1.0151	.0019	1555	-0.1					
	CM-05	1.015	13	1.0127	.0027	1552	+0.9					
OSMOLALITY-URINE	MOSM/KG H2O											
TEST NOT PERFORMED	CM-01		10					ADVANCED INSTRUMENTS	1081.7	13.6	1093	+0.0
	CM-02		10						845.9	8.6	1084	+0.0
	CM-03		10						1089.9	13.0	1087	+0.0
	CM-04		10						289.0	5.0	1112	+0.0
	CM-05		10						143.3	3.6	1103	+0.0
PROTEIN QUANT. URINE	MG/DL											
TEST NOT PERFORMED	CM-01		10					NO COMPARATIVE METHOD				
	CM-02		10									
	CM-03		10									
	CM-04		10									
	CM-05		10									

CONSTITUENT / METHODS	SPEC.	**** YOUR RESULT ****	CODE	GOOD PERFORMANCE	ACCEPTABLE PERFORMANCE
PH IN URINE					
AMES-CLINITEK	CM-01	6.5	61	6.5	6.0 7.0
	CM-02	8.0 OR MORE	61	8.0 OR MORE	7.0 7.5

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1992

CLINICAL MICROSCOPY

EVALUATION

SURVEY SET: CM - A
CAP NUMBER: 38988-01-01-01 KIT# 01
ATTENTION:
INSTITUTION: PENNINGTON BIOMEDICAL RSCH CTR

KIT MAILED: 3/30/92
QUEST. EVAL: 6/03/92

CONSTITUENT METHODS	SPEC.	**** YOUR RESULT ****	CODE	GOOD PERFORMANCE	ACCEPTABLE PERFORMANCE
	CM-03	5.5	61	5.0 5.5 6.0	
	CM-04	8.0 OR MORE	61	8.0 OR MORE	7.0 7.5
	CM-05	8.0 OR MORE	61	8.0 OR MORE	7.0 7.5
PROTEIN QUAL, URINE AMES-CLINITEK	CM-01	100 MG/DL (2+)	61	100 MG/DL (2+) 300-500 MG/DL (3+)	TRACE 30 MG/DL (1+) 1000 MG/DL(4+)OR MORE
	CM-02	NEGATIVE	61	NEGATIVE	
	CM-03	300-500 MG/DL (3+)	61	300-500 MG/DL (3+)	TRACE 30 MG/DL (1+) 100 MG/DL (2+) 1000 MG/DL(4+)OR MORE
	CM-04	100 MG/DL (2+)	61	100 MG/DL (2+) 300-500 MG/DL (3+)	TRACE 30 MG/DL (1+) 1000 MG/DL(4+)OR MORE
	CM-05	30 MG/DL (1+)	61	30 MG/DL (1+) 100 MG/DL (2+)	TRACE 300-500 MG/DL (3+) 1000 MG/DL(4+)OR MORE
GLUCOSE REDUC SUB-UR AMES-CLINITEK	CM-01	NEGATIVE	61	NEGATIVE	
	CM-02	250 MG/DL	61	250 MG/DL 500 MG/DL	< 100 MG/DL 100 MG/DL 1000 MG/DL 2000 MG/DL OR MORE

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800/323-4040

1992

CLINICAL MICROSCOPY

EVALUATION

SURVEY SET: CM - A
CAP NUMBER: 38988-01-01-01 KIT# 01
ATTENTION:
INSTITUTION: PENNINGTON BIOMEDICAL RSCH CTR

KIT MAILED: 3/30/92
QUEST. EVAL: 6/03/92

CONSTITUENT / METHODS	SPEC.	**** YOUR RESULT ****	CODE	GOOD PERFORMANCE	ACCEPTABLE PERFORMANCE
	CM-03	NEGATIVE	61	NEGATIVE	
	CM-04	500 MG/DL	61	500 MG/DL 1000 MG/DL	< 100 MG/DL 100 MG/DL 250 MG/DL 2000 MG/DL OR MORE
	CM-05	100 MG/DL	61	< 100 MG/DL 100 MG/DL	250 MG/DL 500 MG/DL 1000 MG/DL 2000 MG/DL OR MORE
KETONES-URINE AMES-CLINITEK	CM-01	MODERATE (2+)	61	SMALL (1+) MODERATE (2+)	LARGE (3+)
	CM-02	NEGATIVE	61	NEGATIVE	
	CM-03	LARGE (3+)	61	LARGE (3+)	SMALL (1+) MODERATE (2+)
	CM-04	NEGATIVE	61	NEGATIVE	
	CM-05	NEGATIVE	61	NEGATIVE	
BILIRUBIN, URINE AMES-CLINITEK	CM-01	NEGATIVE	61	NEGATIVE	
	CM-02	NEGATIVE	61	NEGATIVE	
	CM-03	NEGATIVE	61	NEGATIVE	
	CM-04	NEGATIVE	61	NEGATIVE	
	CM-05	LARGE AMOUNT (3+)	61	POSITIVE (MOD OR 2+) LARGE AMOUNT (3+)	TRACE (SMALL OR 1+)
BLOOD/HEMOGLOBIN URINE AMES-CLINITEK	CM-01	• TRACE (5-10 ERY/UL)	61	POSITIVE (50 ERY/UL) MARKED POSITIVE (250)	TRACE (5-10 ERY/UL)
	CM-02	NEGATIVE	61	NEGATIVE	

College of American Pathologists
325 Waukegan Road Northfield, Illinois 60093-2750
800/323-4040

1992

CLINICAL MICROSCOPY

EVALUATION

SURVEY SET: CM - A
CAP NUMBER: 38988-01-01-01 KIT# 01
ATTENTION:
INSTITUTION: PENNINGTON BIOMEDICAL RSCH CTR

KIT MAILED: 3/30/92
QUEST. EVAL: 6/03/92

CONSTITUENT METHODS	SPEC.	**** YOUR RESULT ****	CODE	GOOD PERFORMANCE	ACCEPTABLE PERFORMANCE
BLOOD/HEMOGLOBIN URINE					
	CM-03	POSITIVE (50 ERY/UL)	61	POSITIVE (50 ERY/UL) MARKED POSITIVE (250)	TRACE (5-10 ERY/UL)
	CM-04	NEGATIVE	61	NEGATIVE	
	CM-05	MARKED POSITIVE (250)	61	POSITIVE (50 ERY/UL) MARKED POSITIVE (250)	TRACE (5-10 ERY/UL)
LEUKOCYTE ESTERASE					
AMES-CLINITEK	CM-01	NEGATIVE	61	NEGATIVE	
	CM-02	LARGE (3+)	61	MODERATE (2+) LARGE (3+)	TRACE SMALL (1+)
	CM-03	NEGATIVE	61	NEGATIVE	
	CM-04	MODERATE (2+)	61	MODERATE (2+)	TRACE SMALL (1+) LARGE (3+)
	CM-05	NEGATIVE	61	NEGATIVE	
NITRITE/URINE					
AMES-CLINITEK	CM-01	POSITIVE	61	POSITIVE	
	CM-02	NEGATIVE	61	NEGATIVE	
	CM-03	NEGATIVE	61	NEGATIVE	
	CM-04	POSITIVE	61	POSITIVE	
	CM-05	NEGATIVE	61	NEGATIVE	
URINE HCG					
TEST NOT PERFORMED	CM-01		10	SEE SUMMARY REPORT	SEE SUMMARY REPORT
	CM-02		10	SEE SUMMARY REPORT	SEE SUMMARY REPORT
	CM-03		10	SEE SUMMARY REPORT	SEE SUMMARY REPORT
	CM-04		10	SEE SUMMARY REPORT	SEE SUMMARY REPORT

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800/323-4040

1992

CLINICAL MICROSCOPY

EVALUATION

SURVEY SET: CM - A
CAP NUMBER: 38988-01-01-01 KIT# 01
ATTENTION:
INSTITUTION: PENNINGTON BIOMEDICAL RSCH CTR

KIT MAILED: 3/30/92
QUEST. EVAL: 6/03/92

CONSTITUENT METHODS	SPEC.	**** YOUR RESULT ****	CODE	GOOD PERFORMANCE	ACCEPTABLE PERFORMANCE
URINE HCG					
	CM-05		62	SEE SUMMARY REPORT	SEE SUMMARY REPORT
SIMULATED URINE SEDIMT	RBC	NEGATIVE	10	SEE SUMMARY REPORT	SEE SUMMARY REPORT
	WBC	1-2	10	SEE SUMMARY REPORT	SEE SUMMARY REPORT
	EPI	1-2	10	SEE SUMMARY REPORT	SEE SUMMARY REPORT
	BAC	10-50	10	SEE SUMMARY REPORT	SEE SUMMARY REPORT
	YEAST	NEGATIVE	10	SEE SUMMARY REPORT	SEE SUMMARY REPORT
	MUCUS	NEGATIVE	10	SEE SUMMARY REPORT	SEE SUMMARY REPORT
	SPERM	NEGATIVE	10	SEE SUMMARY REPORT	SEE SUMMARY REPORT
	CAST	NEGATIVE	10	SEE SUMMARY REPORT	SEE SUMMARY REPORT
	CAST		10	SEE SUMMARY REPORT	SEE SUMMARY REPORT
	CRYST	NEGATIVE	10	SEE SUMMARY REPORT	SEE SUMMARY REPORT
	CRYST		10	SEE SUMMARY REPORT	SEE SUMMARY REPORT
URINE SEDIMENT IDENT.	CM-06	FAT GLOBULES	72	SEE SUMMARY REPORT	SEE SUMMARY REPORT
	CM-07	CYSTINE CRYSTALS	71	CYSTINE CRYSTALS	
CSF & BODY FLUID	CM-08	TEST NOT PERF. IN LAB.	71	LYMPHOCYTE	LYMPH. REACT.(ATYPICL) PLASMA CELL
	CM-09	TEST NOT PERF. IN LAB.	71	ERYTHROCYTE,MATURE	
	CM-10	TEST NOT PERF. IN LAB.	72	SEE SUMMARY REPORT	SEE SUMMARY REPORT

● RESULT ACCEPTABLE

College of American Pathologists
325 Waukegan Road Northfield, Illinois 60093-2750
800/323-4040

1 9 9 2

CLINICAL MICROSCOPY

E V A L U A T I O N

SURVEY SET: CM - A
CAP NUMBER: 38988-01-01-01 KIT# 01
ATTENTION:
INSTITUTION: PENNINGTON BIOMEDICAL RSCH CTR

DATE: 6/03/92

SUMMARY OF YOUR PERFORMANCE OVER THE LAST THREE QUARTERS FOR ANALYTES REGULATED UNDER THE 03-14-90 UNIFORM PT GUIDELINES OF CLIA'67

REGULATED ANALYTE	QUESTIONNAIRE ID: TEST EVENT	QUESTIONNAIRE ID: CAP #	QUESTIONNAIRE ID: KIT	TOTAL SAMPLES	SUMMARY OF YOUR RESPONSES: TOTAL	SUMMARY OF YOUR RESPONSES: ACCEPTABLE	PERFORMANCE SCORES BY YEAR-QUARTER: 91-3	91-4	92-1	CURRENT QUARTER PERFORMANCE INTERPRETATION	CUMULATIVE PERFORMANCE INTERPRETATION
CORTISOL	C3-92A	38988-01-01-01	01	5	0				TNP	NOT PERFORMED	NOT APPLICABLE
HCG - QUAL	CM-92A	38988-01-01-01	01	5	0				TNP	NOT PERFORMED	NOT APPLICABLE
T3 UPTAKE	C3-92A	38988-01-01-01	01	10	0				TNP	NOT PERFORMED	NOT APPLICABLE
TSH	C3-92A	38988-01-01-01	01	5	0				TNP	NOT PERFORMED	NOT APPLICABLE
THYROXINE	C3-92A	38988-01-01-01	01	5	0				TNP	NOT PERFORMED	NOT APPLICABLE
SUMMARY TOTALS FOR ENDOCRINOLOGY				30	0					NOT PERFORMED	

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pH	CM-92A	38988-01-01-01	01	5	5	5			100	SATISFACTORY	SUCCESSFUL
BILIRUBIN	CM-92A	38988-01-01-01	01	5	5	5			100	SATISFACTORY	SUCCESSFUL
GLUCOSE	CM-92A	38988-01-01-01	01	5	5	5			100	SATISFACTORY	SUCCESSFUL
HEMOGLOBIN	CM-92A	38988-01-01-01	01	5	5	5			100	SATISFACTORY	SUCCESSFUL
KETONES	CM-92A	38988-01-01-01	01	5	5	5			100	SATISFACTORY	SUCCESSFUL
PROTEIN	CM-92A	38988-01-01-01	01	5	5	5			100	SATISFACTORY	SUCCESSFUL
SUMMARY TOTALS FOR URINALYSIS				30	30	30			100	SATISFACTORY	SUCCESSFUL

NOTE: N/E = NOT ENROLLED

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YOUR NEXT SURVEY KIT, SET CM-B, IS SCHEDULED TO BE SHIPPED JULY 6, 1992.

PENNINGTON BIOMEDICAL RSCH CTR
CLINICAL RESEARCH LABORATORY
6400 PERKINS RD.
BATON ROUGE LA 70808

CHECKED BY Kevin Munson DATE REVIEWED 6/8/92

THE COLLEGE OF AMERICAN PATHOLOGISTS RECOMMENDS THAT THE RESULTS OF THIS INTERLABORATORY COMPARISON NOT BE USED AS A SOLE CRITERION FOR JUDGING THE PERFORMANCE OF ANY INDIVIDUAL CLINICAL LABORATORY